Darcy L. Endo-Omoto
*Vice President*
*Government & Community Affairs*

April 29, 2010



The Honorable Chairman and Members of the
Hawaii Public Utilities Commission
465 South King Street, First Floor
Kekuanaoa Building
Honolulu, Hawaii 96813

Dear Commissioners:

Subject: Docket No. 2008-0083
Hawaiian Electric 2009 Test Year Rate Case
CIP CT-1 Air Permit Modification and Biofuel Supply Report

Hawaiian Electric Company, Inc. ("Hawaiian Electric" or the "Company") respectfully submits the attached report regarding the Company's progress in obtaining the necessary air permit modification, and in acquiring an operational supply of biodiesel for its Campbell Industrial Park CT-1 generating unit ("CIP CT-1"), pursuant to the Second Interim Decision and Order, filed February 19, 2010, in the subject proceeding.

Hawaiian Electric has obtained the necessary State Department of Health ("DOH") air permit modification to utilize biodiesel (based on yellow grease/waste animal fat feedstock) and biodiesel/diesel blends with up to 1% diesel in CIP CT-1. (See Exhibit 1, Air Permit Modification, for additional details.) As a result, no further reports are planned to be provided on the CIP CT-1 air permit.

Hawaiian Electric has signed a Biodiesel Supply Contract with Renewable Energy Group ("REG"), which was submitted for Commission approval on December 22, 2009 in Docket No. 2009-0353. In late March 2010, the Company issued a Request for Proposal ("RFP") to solicit proposals for biofuel produced from feedstocks grown in, made in, or otherwise originating in Hawaii. In addition, Hawaiian Electric expects to issue an all fuels RFP later this year. (Additional details are provided in Exhibit 1, Acquisition of Biodiesel Supply.)

Sincerely,

Attachments

c: Division of Consumer Advocacy (with Attachments)
Department of Defense (with Attachments)

# CAMPBELL INDUSTRIAL PARK ("CIP") CT-1
# AIR PERMIT MODIFICATION & BIOFUEL ACQUISITION
# STATUS REPORT

## Background

The Second Interim Decision and Order, filed February 19, 2010, in the subject proceeding, requires the Company, among other things, to file a report detailing its progress in obtaining the necessary air permit modification and in acquiring an operational supply of biodiesel for the Campbell Industrial Park CT-1 generating unit ("CIP CT-1"), within thirty days of the end of each calendar quarter, until these items are secured.

## Air Permit Modification

Hawaiian Electric has obtained the necessary State Department of Health ("DOH") air permit modification to utilize biodiesel (based on yellow grease/waste animal fat feedstock) and biodiesel/diesel blends with up to 1% diesel in CIP CT-1. This was accomplished in two steps.

First, Hawaiian Electric obtained DOH approval of a modification of the Alternate Operating Scenario provision in the air permit ("AOS Permit Modification") to allow Hawaiian Electric to burn biofuels of different feedstocks without requiring the submission of a significant air permit modification for each type of biodiesel feedstock. Under the AOS Permit Modification, Hawaiian Electric can obtain DOH approval to use a specific biofuel based on a certain type of feedstock in CIP CT-1 by submitting a letter to DOH requesting approval to utilize that biofuel, along with the supporting data regarding the biofuel emissions, resulting in a more expedient process. On February 24, 2010, the DOH notified Hawaiian Electric that the Company's September 2009 AOS Permit Modification application for significant modification of the CIP CT-1 air permit had been granted.[1] (See Exhibit 2.)

Second, as a result of receiving the AOS Permit Modification, on February 24, 2010, Hawaiian Electric hand-delivered to DOH a letter request to utilize biodiesel (based on yellow grease/waste animal fat feedstock) and biodiesel/diesel blends with up to 1% diesel in CIP CT-1,

[1] Hawaiian Electric had planned to submit to DOH, in parallel with the application for AOS Permit Modification, a separate application for a significant air permit modification specific to the particular biofuel used in the December 2009 Biodiesel Emissions Data Project. Upon further consideration of the potential negative impacts of having two air permit modification applications before the DOH at the same time (e.g., slower processing time), the Company decided to first await DOH's decision on the application for the AOS Permit Modification. The AOS Permit Modification results in a more expedient DOH approval process to burn biofuels of a different feedstock, without having to submit a significant air permit modification (possibly a 6 month process) each time the feedstock changes. With the approval of the AOS Permit Modification, an application for a significant air permit modification for a specific biofuel for CIP CT-1 is not needed.

using the emissions data from the December 2009 CIP CT-1 Biodiesel Emissions Data Project.[2] By letter dated March 2, 2010, DOH approved Hawaiian Electric's February 2010 letter request. (See Exhibit 3.)

**Acquisition of Biodiesel Supply**

A Biodiesel Supply Contract between Hawaiian Electric and Renewable Energy Group ("REG"), signed on December 21, 2009, was submitted for Commission approval on December 22, 2009 in Docket No. 2009-0353. (The Biodiesel Supply Contract provides a two-year supply of biodiesel for CIP CT-1.) On February 9, 2010, the Commission approved the proposed procedural schedule, as modified, for the proceeding in Docket No. 2009-0353. The Consumer Advocate and Life of the Land's Statements of Position were filed on April 12, 2010, and Hawaiian Electric's Reply Statement of Position was filed on April 26, 2010. As of the date of this filing, all of the steps in the schedule of proceedings in Docket No. 2009-0353 have been completed. Hawaiian Electric has respectfully requested a Commission decision as soon as practicable, but no later than May 31, 2010, in order to have biodiesel under the Biodiesel Supply Contract on site by the fourth quarter of 2010.

On March 31, 2010, Hawaiian Electric issued a Request for Proposal ("RFP") to solicit proposals for biofuel produced from feedstocks grown in, made in, or otherwise originating in Hawaii ("local biofuel") to potentially supply multiple locations, including CIP CT-1. The deadline to submit a proposal pursuant to the RFP is June 18, 2010. A contract could be awarded to supply some or all of CIP CT-1 requirements upon expiration of the Biodiesel Supply Contract with REG, contingent upon a viable and reasonable proposal for a local biofuel designed to meet the requirements for CIP CT-1.

Hawaiian Electric expects to issue an all fuels RFP in the fourth quarter of 2010 to solicit proposals for fuel to include CIP CT-1 biodiesel requirements that are not fulfilled through a contract for local biofuels and/or upon expiration of the REG Biodiesel Supply Contract term.

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[2] The biodiesel supply contract for the Biodiesel Emissions Data Project is the subject of Docket No. 2009-0296. The biodiesel tuning and testing commenced on December 3, 2009, and concluded on December 15, 2009. See the letter to the Commission dated January 5, 2010, and filed January 6, 2010, in Docket No. 2009-0296 for additional information.

FILE COPY

LINDA LINGLE
GOVERNOR OF HAWAII

CHIYOME L. FUKINO, M.D.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. Box 3378
HONOLULU, HAWAII 96801-3378

Initials MM 2-22-2010
Mailed Out FEB 24 2010

In reply, please refer to
File:

February 22, 2010

10-140E CAB
File No. 0548

Mr. Thomas C. Simmons
Vice President, Power Supply
Hawaiian Electric Company, Inc.
P.O. Box 2750
Honolulu, Hawaii 96840-0001

Dear Mr. Simmons:

**Subject: Covered Source Permit (CSP) No. 0548-01-C**
**Application for Modification No. 0548-04**
**Hawaiian Electric Company, Inc.**
**Campbell Industrial Park Generating Station**
**Location: 91-196 Hanua Street, Kapolei, Oahu**

Please find enclosed the subject permit that was recently approved by the Department of Health subsequent to the 30-day public comment period and the 45-day review period by the U.S. Environmental Protection Agency. For your information, the Department made the following corrections to the permit after additional review:

1) Attachment IIA, Special Condition No. C.4.a was corrected to reference Attachment IIA, Special Condition No. F.3.b instead of Attachment IIA, Special Condition No. F.3.a;

2) The heading in table from Attachment IIA, Special Condition No. C.6.g was corrected from "Maximum Emission Limit (3-hour average) Fired Naphtha, Fuel Oil No. 2, or Alternate fuel" to "Maximum Emission Limit (3-hour average) Fired on Naphtha, Fuel Oil No. 2, or Alternate Fuel";

3) Attachment IIA, Special Condition No. D.3.a was corrected to reference Attachment IIA, Special Condition No. F.3.b instead of Attachment IIA, Special Condition No. F.3.a;

4) Attachment IIA, Special Condition No. D.5.f was corrected to reference Attachment IIA, Special Condition No. F.3.b instead of Attachment IIA, Special Condition No. F.3.a;

5) Attachment IIA, Special Condition No. E.3.a.iv(2) was corrected to reference Attachment IIA, Special Condition No. C.1.a instead of Attachment IIA, Special Condition Nos. C.1.a and C.1.b;

6) Attachment IIA, Special Condition No. F.3 was changed to specify Condition Nos. 3.a through 3.l instead of Condition Nos. 3.a, 3.b, and 3.b through 3k;

7) The second page of Attachment II – INSG: Special Conditions – Insignificant Activities was changed to reference Page 2 of 2 instead of Page 2 of 3; and

8) Hawaiian Electric Company, Inc. (HECO) was specified for the company/facility name on the Compliance Certification Form.

If there are any questions regarding this matter, please contact Mr. Mike Madsen of my staff at (808) 586-4200.

Sincerely,

WILFRED K. NAGAMINE
Manager, Clean Air Branch

MM:smk
Enclosure

c: CAB Monitoring Section

February 24, 2010

**CERTIFIED MAIL**
**RETURN RECEIPT REQUESTED**
**(7006 0100 0004 9701 3417)**

10-131E CAB
File No. 0548

Mr. Thomas C. Simmons
Vice President, Power Supply
Hawaiian Electric Company, Inc.
P. O. Box 2750
*Honolulu, Hawaii 96840-0001*

Dear Mr. Simmons:

**Subject: Covered Source Permit (CSP) No. 0548-01-C**
**Application for Modification No. 0548-04**
**Hawaiian Electric Company, Inc.**
**Campbell Industrial Park Generating Station**
**Located at: 91-196 Hanua Street, Kapolei, Oahu**
**UTM - 592,526 Meters East and 2,356,666 Meters North, Zone 4 (Old Hawaiian)**
**Date of Expiration: May 21, 2012**

The subject covered source permit is issued in accordance with Hawaii Administrative Rules (HAR), Title 11, Chapter 60.1, Air Pollution Control and 40 Code of Federal Regulations (CFR) §52.21, Prevention of Significant Deterioration (PSD). The issuance of this permit is based on the plans, specifications, and information that you submitted as part of your application for modification on September 28, 2009 and the additional information as part of your application received on November 19, 2009. The conditions of this permit modification supersede all conditions contained in all prior permits.

The covered source permit is issued subject to the conditions/requirements set forth in the following Attachments:

Attachment I: Standard Conditions
Attachment IIA: Special Conditions - CIP1, CIP2, BSG1, and BSG2
Attachment IIB: Special Conditions - Storage Tanks
Attachment II - INSIG: Special Conditions - Insignificant Activities
Attachment III: Annual Fee Requirements
Attachment IV: Annual Emissions Reporting Requirements

The following forms are enclosed for your use and submittal as required:

Compliance Certification Form
Excess Emission and Monitoring System Performance Summary Report
Annual Emissions Report Form: CIP1 and CIP2
Annual Emissions Report Form: BSG1 and BSG2
Annual Emissions Report Form: Storage Tanks
Monitoring Report Form: CIP1 and CIP2 Firing Rate
Monitoring Report Form: CIP1 and CIP2 Operation
Monitoring Report Form: CIP1, CIP2, BSG1, and BSG2 Fuel Certification
Monitoring Report Form: BSG1 and BSG2 Operating Hours
Monitoring Report Form: Storage Tanks

This permit: (a) shall not in any manner affect the title of the premises upon which the equipment is to be located; (b) does not release the permittee from any liability for any loss due to personal injury or property damage caused by, resulting from or arising out of the design, installation, maintenance, or operation of the equipment; and (c) in no manner implies or suggests that the Hawaii Department of Health, or its officers, agents, or employees, assumes any liability, directly or indirectly, for any loss due to personal injury or property damage caused by, resulting from or arising out of the design, installation, maintenance, or operation of the equipment.

Sincerely,

STUART YAMADA, P.E., ACTING CHIEF
Environmental Management Division

MM:smk

Enclosures

c: CAB Monitoring Section

**ATTACHMENT I: STANDARD CONDITIONS**
**COVERED SOURCE PERMIT NO. 0548-01-C**

**Issuance Date: February 24, 2010** **Expiration Date: May 21, 2012**

This permit is granted in accordance with the Hawaii Administrative Rules (HAR), Title 11, Chapter 60.1, Air Pollution Control, and is subject to the following standard conditions:

1. Unless specifically identified, the terms and conditions contained in this permit are consistent with the applicable requirement, including form, on which each term or condition is based.

   (Auth.: HAR §11-60.1-90)

2. This permit, or a copy thereof, shall be maintained at or near the source and shall be made available for inspection upon request. The permit shall not be wilfully defaced, altered, forged, counterfeited, or falsified.

   *(Auth.: HAR §11-60.1-6; SIP §11-60-11)*[2]

3. This permit is not transferable whether by operation of law or otherwise, from person to person, from place to place, or from one piece of equipment to another without the approval of the Department of Health, except as provided in HAR, Section 11-60.1-91.

   (Auth.: HAR §11-60.1-7; SIP §11-60-9)[2]

4. A request for transfer from person to person shall be made on forms furnished by the Department of Health.

   (Auth.: HAR §11-60.1-7)

5. In the event of any changes in control or ownership of the facilities to be constructed or modified, this permit shall be binding on all subsequent owners and operators. The permittee shall notify the succeeding owner and operator of the existence of this permit and its conditions by letter, copies of which will be forwarded to the Department of Health and the U.S. Environmental Protection Agency (EPA), Region 9.

   (Auth.: HAR §11-60.1-5, §11-60.1-7, §11-60.1-94)

6. The facility covered by this permit shall be constructed and operated in accordance with the application, and any information submitted as part of the application, for the Covered Source Permit. There shall be no deviation unless additional or revised plans are submitted to and approved by the Department of Health, and the permit is amended to allow such deviation.

   (Auth.: HAR §11-60.1-2, §11-60.1-4, §11-60.1-82, §11-60.1-84, §11-60.1-90)

7. This permit: (a) does not release the permittee from compliance with other applicable statutes of the State of Hawaii, or with applicable local laws, regulations, or ordinances, and

(b) shall not constitute, nor be construed to be an approval of the design of the covered source.

(Auth.: HAR §11-60.1-5, §11-60.1-82)

8. The permittee shall comply with all the terms and conditions of this permit. Any permit noncompliance constitutes a violation of HAR, Chapter 11-60.1 and the Clean Air Act and is grounds for enforcement action; for permit termination, suspension, reopening, or amendment; or for denial of a permit renewal application.

   (Auth.: HAR §11-60.1-3, §11-60.1-10, §11-60.1-19, §11-60.1-90)

9. If any term or condition of this permit becomes invalid as a result of a challenge to a portion of this permit, the other terms and conditions of this permit shall not be affected and shall remain valid.

   (Auth.: HAR §11-60.1-90)

10. The permittee shall not use as a defense in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the terms and conditions of this permit.

    (Auth.: HAR §11-60.1-90)

11. This permit may be terminated, suspended, reopened, or amended for cause pursuant to HAR, Sections 11-60.1-10 and 11-60.1-98, and Hawaii Revised Statutes (HRS), Chapter 342B-27, after affording the permittee an opportunity for a hearing in accordance with HRS, Chapter 91.

    (Auth.: HAR §11-60.1-3, §11-60.1-10, §11-60.1-90, §11-60.1-98)

12. The filing of a request by the permittee for the termination, suspension, reopening, or amendment of this permit, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

    (Auth.: HAR §11-60.1-90)

13. This permit does not convey any property rights of any sort, or any exclusive privilege.

    (Auth.: HAR §11-60.1-90)

14. The permittee shall notify the Department of Health and U.S. EPA, Region 9, in writing of the following dates:

    a. The **anticipated date of initial start-up** for each emission unit of a new source or significant modification not more than sixty (60) days or less than thirty (30) days prior to such date;
    b. The **actual date of construction commencement** within fifteen (15) days after such date; and
    c. The **actual date of start-up** within fifteen (15) days after such date.

    (Auth.: HAR §11-60.1-90)

15. The permittee shall furnish, in a timely manner, any information or records requested in writing by the Department of Health to determine whether cause exists for terminating, suspending, reopening, or amending this permit, or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Department of Health copies of records required to be kept by the permittee. For information claimed to be confidential, the Director of Health may require the permittee to furnish such records not only to the Department of Health but also directly to the U.S. EPA, Region 9 along with a claim of confidentiality.

    (Auth.: HAR §11-60.1-14, §11-60.1-90)

16. The permittee shall notify the Department of Health in writing, of the **intent to shut down air pollution control equipment for necessary scheduled maintenance** at least twenty-four (24) hours prior to the planned shutdown. The submittal of this notice shall not be a defense to an enforcement action. The notice shall include the following:

    a. Identification of the specific equipment to be taken out of service, as well as its location and permit number;
    b. The expected length of time that the air pollution control equipment will be out of service;
    c. The nature and quantity of emissions of air pollutants likely to be emitted during the shutdown period;
    d. Measures such as the use of off-shift labor and equipment that will be taken to minimize the length of the shutdown period; and
    e. The reasons why it would be impossible or impractical to shut down the source operation during the maintenance period.

    (Auth.: HAR §11-60.1-15; SIP §11-60-16)[2]

17. **Except for emergencies which result in noncompliance with any technology-based emission limitation in accordance with HAR, Section 11-60.1-16.5, in the event any emission unit, air pollution control equipment, or related equipment malfunctions or**

**breaks down in such a manner as to cause the emission of air pollutants in violation of HAR, Chapter 11-60.1 or this permit**, the permittee shall immediately notify the Department of Health of the malfunction or breakdown, unless the protection of personnel or public health or safety demands immediate attention to the malfunction or breakdown and makes such notification infeasible. In the latter case, the notice shall be provided as soon as practicable. Within five (5) working days of this initial notification, the permittee shall also submit, in writing, the following information:

a. Identification of each affected emission point and each emission limit exceeded;
b. Magnitude of each excess emission;
c. Time and duration of each excess emission;
d. Identity of the process or control equipment causing each excess emission;
e. Cause and nature of each excess emission;
f. Description of the steps taken to remedy the situation, prevent a recurrence, limit the excessive emissions, and assure that the malfunction or breakdown does not interfere with the attainment and maintenance of the National Ambient Air Quality Standards and state ambient air quality standards;
g. Documentation that the equipment or process was at all times maintained and operated in a manner consistent with good practice for minimizing emissions; and
h. A statement that the excess emissions are not part of a recurring pattern indicative of inadequate design, operation, or maintenance.

The submittal of these notices shall not be a defense to an enforcement action.

(Auth.: HAR §11-60.1-16; SIP §11-60-16)[2]

18. The permittee may request confidential treatment of any records in accordance with HAR Section 11-60.1-14.

    (Auth.: HAR §11-60.1-14, §11-60.1-90)

19. This permit shall become invalid with respect to the authorized construction if construction is not commenced as follows:

    a. Construction shall be commenced within eighteen (18) months after the permit takes effect, shall not be discontinued for a period of eighteen (18) months or more, and shall be completed within a reasonable time.

    b. For phased construction projects, each phase shall commence construction within eighteen (18) months of the projected and approved commencement dates in the permit. This provision shall be applicable only if the projected and approved

commencement dates of each construction phase are defined in Attachment II, Special Conditions of this permit.

(Auth.: HAR §11-60.1-9, §11-60.1-90)

20. The Department of Health may extend the time periods specified in Standard Condition No. 19 upon a satisfactory showing that an extension is justified. Requests for an extension shall be submitted in writing to the Department of Health.

    (Auth.: HAR §11-60.1-9, §11-60.1-90)

21. The permittee shall submit fees in accordance with HAR, Chapter 11-60.1, Subchapter 6.

    (Auth.: HAR §11-60.1-90)

22. All certifications shall be in accordance with HAR, Section 11-60.1-4.

    (Auth.: HAR §11-60.1-4, §11-60.1-90)

23. The permittee shall allow the Director of Health, the Regional Administrator for the U.S. EPA, and/or an authorized representative, upon presentation of credentials or other documents required by law:

    a. To enter the premises where a source is located or emission-related activity is conducted, or where records must be kept under the conditions of this permit and inspect at reasonable times all facilities, equipment, including monitoring and air pollution control equipment, practices, operations, or records covered under the terms and conditions of this permit and request copies of records or copy records required by this permit; and
    b. To sample or monitor at reasonable times substances or parameters to assure compliance with this permit or applicable requirements of HAR, Chapter 11-60.1.

    (Auth.: HAR §11-60.1-11, §11-60.1-90)

24. Within thirty (30) days of **permanent discontinuance of the construction, modification, relocation, or operation of the facility covered by this permit**, the discontinuance shall be reported in writing to the Department of Health by a responsible official of the source.

    (Auth.: HAR §11-60.1-8; SIP §11-60-10)[2]

25. Each permit renewal application shall be submitted to the Department of Health and the U.S. EPA, Region 9 no less than twelve (12) months and no more than eighteen (18) months prior to the permit expiration date. The Department of Health may allow a permit renewal application to be submitted no less than six (6) months prior to the permit

expiration date, if the Department of Health determines that there is reasonable justification.

(Auth.: HAR §11-60.1-101, 40 CFR §70.5 (a)(1)(iii))[1]

26. The terms and conditions included in this permit, including any provision designed to limit a source's potential to emit, are federally enforceable unless such terms, conditions, or requirements are specifically designated as not federally enforceable.

    (Auth.: HAR §11-60.1-93)

27. The compliance plan and compliance certification submittal requirements shall be in accordance with HAR, Sections 11-60.1-85 and 11-60.1-86. As specified in HAR, Section 11-60.1-86, the compliance certification shall be submitted to the Department of Health and the U.S. EPA, Region 9 once per year, or more frequently as set by any applicable requirement.

    (Auth.: HAR §11-60.1-90)

28. The best available control technology (BACT) emission limits specified in Attachment IIA, Special Condition No. C.6 and other associated conditions are derived from the PSD requirements of 40 CFR §52.21. With the exception of permit conditions associated with the PSD regulations, the operating permit shall expire on the designated expiration date. The permit will remain valid past its expiration date after a complete permit renewal application is submitted in accordance with HAR §11-60.1-101 prior to the permit expiration date.

    (Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-101, 40 CFR §52.21)[1]

29. All PSD conditions are subject to the applicable procedures in 40 CFR Part 124, including the appeal provisions in 40 CFR §124.19.

    (Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-101, 40 CFR §52.21)[1]

30. **Any document (including reports) required to be submitted by this permit shall be certified as being true, accurate, and complete by a responsible official in accordance with HAR, Sections 11-60.1-1 and 11-60.1-4, and shall be mailed to the following address:**

    **Clean Air Branch**
    **Environmental Management Division**
    **State of Hawaii Department of Health**
    **919 Ala Moana Boulevard, Room 203**
    **Honolulu, HI 96814**

**Upon request and as required by this permit, all correspondence to the State of Hawaii Department of Health associated with this Covered Source Permit shall have duplicate copies forwarded to:**

**Chief**
**Permits Office, (Attention: Air-3)**
**Air Division**
**U.S. Environmental Protection Agency**
**Region 9**
**75 Hawthorne Street**
**San Francisco, CA 94105**

(Auth.: HAR §11-60.1-4, §11-60.1-90)

31. To determine compliance with submittal deadlines for time-sensitive documents, the postmark date of the document shall be used. If the document was hand-delivered, the date received ("stamped") at the Clean Air Branch shall be used to determine the submittal date.

    (Auth.: HAR §11-60.1-5, §11-60.1-90)

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[1] The citations to the Code of Federal Regulations (CFR) identified under a particular condition, indicate that the permit condition complies with the specified provision(s) of the CFR. Due to the integration of the preconstruction and operating permit requirements, permit conditions may incorporate more stringent requirements than those set forth in the CFR.

[2] The citations to the State Implementation Plan (SIP) identified under a particular condition, indicate that the permit condition complies with the specified provision(s) of the SIP.

**ATTACHMENT IIA: SPECIAL CONDITIONS - CIP1, CIP2, BSG1, AND BSG2**
**COVERED SOURCE PERMIT NO. 0548-01-C**

**Issuance Date: February 24, 2010** **Expiration Date: May 21, 2012**

In addition to the standard conditions of the covered source permit, the following special conditions shall apply to the permitted facility:

## Section A. Equipment Description

1. Attachment IIA of this permit encompasses the following equipment and associated appurtenances:

| Unit | Description |
|---|---|
| CIP1 | 135 MW Siemens Westinghouse Power Corporation simple cycle combustion turbine generator, model nos. SGT6-3000E and W501D5A, serial no. 37A7724, with water injection system and 210 feet high x 18 feet -10 inch diameter exhaust stack; |
| CIP2 | 135 MW Siemens Westinghouse Power Corporation simple cycle combustion turbine generator, model nos. SGT6-3000E and W501D5A, with water injection system and 210 feet high x 18 feet -10 inch diameter exhaust stack; |
| BSG1 | 2,250 kW Kohler Power Systems black start diesel engine generator, model no. 2250REOZDC (generator set), Detroit Diesel/MTU model no. 16V4000G83 (engine), serial no. 2246450 (generator set), serial no. 5272003082 (engine), with 210 feet high x 2 feet diameter exhaust stack shared with BSG2 attached to stack servicing CIP1; and |
| BSG2 | 2,250 kW Kohler Power Systems black start diesel engine generator, model no. 2250REOZDC (generator set), Detroit Diesel/MTU model no. 16V4000G83 (engine), serial no. 2246451 (generator set), serial no. 5272003325 (engine), with 210 feet high x 2 feet diameter exhaust stack shared with BSG1 attached to stack servicing CIP1. |

(Auth.: HAR §11-60.1-3)

2. The permittee shall permanently attach an identification tag or name plate on CIP1, CIP2, BSG1, and BSG2 which identifies the model no., serial no., and manufacturer. The identification tag or name plate shall be permanently attached to the equipment at a conspicuous location.

(Auth.: HAR §11-60.1-5)

3. Unit Operation

a. CIP1 and CIP2 are intended to provide spinning reserve by being online and dispatched within 10 MW of the minimum operating load. Except during source performance tests in accordance with Attachment IIA, Section F and activities approved by the Department of Health pursuant to Attachment IIA, Special Condition No. C.9.a, CIP1 and CIP2 may be dispatched at higher loads only when the steam

units at other plants are not reasonably able to serve system needs. Steam units at other plants are HECO boilers: Kahe Generating Station Units 1, 2, 3, 4, 5, and 6; Honolulu Generating Station Units 8 and 9; and Waiau Generating Station Units 3, 4, 5, 6, 7, and 8. The Department of Health reserves the right to review dispatch records to determine compliance with this condition.

b. For converting simple cycle combustion turbine generators CIP1 and CIP2 to a combined cycle mode of operation, the permittee shall submit a PSD/CSP application that includes an evaluation of best available control technology (BACT) and ambient air quality impacts. The combined cycle combustion turbine generators will be considered a new source and a net emissions increase based on previous operation is not applicable to the BACT analysis.

(Auth.: HAR §11-60.1-5; 40 CFR §52.21)

## Section B. Applicable Federal Regulations

1. Combustion turbine generators CIP1 and CIP2 and associated equipment are subject to the provisions of the following federal regulations:

   a. 40 CFR Part 60, Standards of Performance for New Stationary Sources, Subpart A, General Provisions;
   b. 40 CFR Part 60, Standards of Performance for New Stationary Sources, Subpart KKKK, Standards of Performance for Stationary Combustion Turbines; and
   c. 40 CFR Part 52, §52.21, Prevention of Significant Deterioration of Air Quality.

2. Black start diesel engine generators BSG1 and BSG2 are subject to the provisions of the following federal regulations:

   a. 40 CFR Part 60, Standards of Performance for New Stationary Sources, Subpart A, General Provisions;
   b. 40 CFR Part 60, Standards of Performance for New Stationary Sources, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines;
   c. 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants for Source Categories, Subpart A, General Provisions; and
   d. 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants for Source Categories, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

The permittee shall comply with all applicable provisions of these standards, including all emission limits and all notification, testing, monitoring, and reporting requirements. The major requirements of these standards are detailed in the special conditions of this permit.

(Auth.: HAR §11-60.1-3, §11-60.1-90, and §11-60.1-161; 40 CFR §52.21, §60.4200, §60.4305, and 63.6580 )[1]

## Section C. Operational and Emissions Limitations

1. Fuel Limits

   a. Except as provided in Attachment IIA, Special Condition Nos. C.9.c, CIP1 and CIP2 shall be fired on naphtha, fuel oil No. 2, or alternate fuel approved pursuant to Attachment IIA, Special Condition No. C.9.d with a maximum sulfur content not to exceed 0.05% by weight.

   b. BSG1 and BSG2 shall be fired only on fuel oil No. 2 with the following specifications:

      i. Maximum sulfur content of 0.05% by weight up through September 30, 2010;
      ii. Maximum sulfur content of 0.0015% by weight after September 30, 2010; and
      iii. Minimum cetane index of 40 or maximum aromatic content of 35 percent.

   c. The total combined fuel firing rate for CIP1 and CIP2 shall not exceed $24.8 \times 10^6$ MMBtu in any rolling twelve-month (12-month) period based on the higher heating value (HHV) in Btu/lb and pounds of each fuel fired.

   (Auth.: HAR §11-60.1-3, §11-60.1-38, §11-60.1-90, and §11-60.1-161; 40 CFR §52.21, §60.4330, and §60.4365)[1]

2. Hour Limits

   a. The total operating hours of BSG1 shall not exceed 500 hours in any rolling twelve-month (12-month) period.

   b. The total operating hours of BSG2 shall not exceed 500 hours in any rolling twelve-month (12-month) period.

   (Auth.: HAR §11-60.1-3, §11-60.1-90)

3. Startup and Shutdown

   a. Each startup sequence for CIP1 and CIP2 shall not exceed sixty (60) minutes. A startup sequence shall be from the time fuel use at the combustion turbine generator

begins, until the time the combustion turbine generator is initially brought up to minimum operating load or more for fifteen (15) consecutive minutes and the water injection system is fully functional.

b. Each shutdown sequence for CIP1 and CIP2 shall not exceed sixty (60) minutes. A shutdown sequence shall be considered from the time when the combustion turbine *generator is below the minimum operating load until fuel use at the combustion turbine* generator ceases.

c. Except during maintenance (e.g., equipment installations and inspections and electrical switching work), testing, and emergency power demands due to sudden loss of a power generating unit, each combustion turbine generator shall not be started more than four (4) times per calendar day.

(Auth.: HAR §11-60.1-3 and §11-60.1-90)

4. Operating Loads

a. Except during combustion turbine generator startup, shutdown, and as approved pursuant to Attachment IIA, Special Condition No. C.9.a, the minimum combustion turbine generator load shall not be less than the minimum operating load of each unit. The minimum operating load shall be defined by the most recent performance test pursuant to Attachment IIA, Special Condition No. F.3.b.

b. Except as approved pursuant to Attachment IIA, Special Condition No. C.9.b, the maximum combustion turbine generator load shall not be greater than each unit's peak capacity.

(Auth.: HAR §11-60.1-3, §11-60.1-5, and §11-60.1-90; 40 CFR §52.21)[1]

5. Air Pollution Control Equipment

a. The permittee shall continuously operate and maintain a water injection system for CIP1 and CIP2 to meet the emission limits specified for nitrogen oxides ($NO_x$) in Attachment IIA, Special Condition Nos. C.6.a, C.6.b, and C.6.g . Upon completion of the startup sequence of each combustion turbine generator, the water injection system shall be fully operational. Water injection shall be initiated during the startup sequence and continue until the beginning of the shutdown sequence for each combustion turbine generator.

b. The water injection system for CIP1 and CIP2 shall be used immediately upon completion of the startup sequence, and at all times thereafter when the combustion turbine generators are operating at minimum operating load and above. After completion of the start-up sequence, the minimum water-to-fuel mass ratios shall be

maintained on a one-hour average basis in accordance with Attachment IIA, Special Condition Nos. C.5.b.i and C.5.b.ii.

i. When the combustion turbine generators are firing naphtha or fuel oil No. 2 the one-hour average water-to-fuel ratios shall be as follows:

| WATER INJECTION SYSTEM MINIMUM WATER-TO-FUEL MASS RATIO | | |
|---|---|---|
| Load | Load (MW)[a, b] | Ratio (lb water/lb fuel) |
| peak | 135 | 1.10 |
| base - < peak | 116 - < 135 | 1.00 |
| 75% - < base | 87 - < 116 | 1.00 |
| 50% - < 75% | 58 - < 87 | 0.95 |
| minimum operating load - < 50% | 28 - < 58 | 0.80 |

Note a: Peak load is based on rated capacity at ISO standard day conditions (59 °F, 1 atm, and 60% relative humidity).
Note b: Minimum operating load, 50% load, 75% load, and base load are based on operating conditions at 86 °F, 1 atm, and 70% relative humidity

ii. The minimum one-hour average water-to-fuel ratios for firing alternate fuels shall be in accordance with that approved by the Department of Health pursuant to Attachment IIA, Special Condition No. C.9.d.

c. For operating hours during which multiple water-to-fuel mass ratios apply, the applicable water-to-fuel standard for that hour shall be determined based on the condition that corresponded to the lowest water-to-fuel mass ratio standard.

d. The use of a control system other than that specified in Attachment IIA, Special Condition No. C.5.b is contingent upon receiving the Department of Health's written approval to use such a system and shall not relieve the permittee from the responsibility to meet all emission limitations contained within this permit.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, and §11-60.1-140; 40 CFR §52.21)[1]

6. Maximum Emission Limits

a. The permittee shall not discharge or cause the discharge into the atmosphere from each combustion turbine generator, a rolling four hour-average $NO_x$ emission in excess of 42 ppmvd @ 15% $O_2$ when operating at loads greater than or equal to 75% of peak load for all four operating hours. For operating periods during which the unit operates at or above and below 75% of peak load, the applicable emission standard shall be determined in accordance with Attachment IIA, Special Condition No. C.6.h.

b. The permittee shall not discharge or cause the discharge into the atmosphere from each combustion turbine generator, a rolling four-hour average $NO_X$ emission in excess of 96 ppmvd @ 15% $O_2$ when operating at loads less than 75% of peak load for all four operating hours. For operating periods during which the unit operates at or above and below 75% of peak load, the applicable emission standard shall be determined in accordance with Attachment IIA, Special Condition No. C.6.h.

c. Except during startup and shutdown, the permittee shall not discharge or cause the discharge into the atmosphere from each combustion turbine generator, sulfur dioxide ($SO_2$) averaged over any rolling three-hour averaging period in excess of the following specified limits for firing naphtha, fuel oil No. 2, or alternate fuel with 0.05% by weight maximum sulfur content:

| Pollutant | Maximum Emission Limit (3-hour average) Fired on Fuel with 0.05% Maximum Sulfur Content | |
|---|---|---|
| | (lb/hr) | (ppmvd @ 15 percent $O_2$) |
| $SO_2$ | | |
| > base - ≤ peak load | 75.3 | 9.7 |
| > 75% - ≤ base load | 71.8 | 9.7 |
| > 50% - ≤ 75% load | 58.3 | 9.8 |
| > 25% - ≤ 50% load | 43.5 | 9.8 |
| 25% | 28.5 | 9.9 |

d. Except during startup and shutdown, the permittee shall not discharge or cause the discharge into the atmosphere from each combustion turbine generator, $SO_2$ averaged over any rolling three-hour averaging period in excess of the following specified limits for firing fuel oil No. 2 with 0.35% by weight maximum sulfur content:

| Pollutant | Maximum Emission Limit (3-hour average) Fired on Fuel Oil No. 2 with 0.35% Maximum Sulfur Content | |
|---|---|---|
| | (lb/hr) | (ppmvd @ 15 percent $O_2$) |
| $SO_2$ | | |
| > base - ≤ peak load | 526.3 | 67.1 |
| > 75% - ≤ base load | 501.5 | 67.3 |
| > 50% - ≤75% load | 407.3 | 67.7 |
| > 25% - ≤ 50% load | 303.9 | 67.5 |
| 25% | 200.0 | 68.2 |

e. Except during startup and shutdown, the permittee shall not discharge or cause the discharge into the atmosphere from each combustion turbine generator, particulate

matter/particulate matter less than 10 microns in diameter ($PM/PM_{10}$) averaged over any rolling three-hour averaging period in excess of the following specified limits for firing naphtha or alternate fuel:

| Pollutant | Maximum Emission Limit (3-hour average) Fired on Naphtha or Alternate Fuel | |
|---|---|---|
| | (lb/hr) | (gr/dscf @12 percent $CO_2$) |
| $PM/PM_{10}$ | | |
| peak load | 51.4 | 0.0208 |
| ≥ base - < peak load | 51.4 | 0.0219 |
| ≥ 75% - < base load | 54.6 | 0.0288 |
| ≥ 50% - < 75% load | 75.4 | 0.0530 |
| ≥ 25% - < 50% load | 75.9 | 0.0815 |

f. Except during startup and shutdown, the permittee shall not discharge or cause the discharge into the atmosphere from each combustion turbine generator, $PM/PM_{10}$ averaged over any rolling three-hour averaging period in excess of the following specified limits for firing fuel oil No. 2 or alternate fuel:

| Pollutant | Maximum Emission Limit (3-hour average) Fired on Fuel Oil No. 2 or Alternate Fuel | |
|---|---|---|
| | (lb/hr) | (gr/dscf @ 12 percent $CO_2$) |
| $PM/PM_{10}$ | | |
| peak load | 54.1 | 0.0222 |
| ≥ base - < peak load | 54.2 | 0.0234 |
| ≥ 75% - < base load | 57.4 | 0.0307 |
| ≥ 50% - < 75% load | 79.4 | 0.0566 |
| ≥ 25% - < 50% load | 80.0 | 0.0868 |

g. Except during startup and shutdown sequences, the permittee shall not discharge or cause the discharge into the atmosphere from each combustion turbine generator $NO_X$, carbon monoxide (CO), and volatile organic compounds (VOCs), averaged over any rolling three-hour averaging period in excess of the following specified limits for firing naphtha, fuel oil No. 2, or alternate fuel:

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| Pollutant | Maximum Emission Limit (3-hour average) Fired on Naphtha, Fuel Oil No. 2, or Alternate Fuel | |
|---|---|---|
| | (lb/hr) | (ppmvd @ 15 percent $O_2$) |
| $NO_X$ as $NO_2$ | | |
| > base - ≤ peak load | 246.8 | 42 |
| > 75% - ≤ base load | 234.9 | 42 |
| > 50% - ≤ 75% load | 189.5 | 42 |
| > 25% - ≤ 50% load | 141.8 | 42 |
| 25% load | 92.4 | 42 |
| CO | | |
| peak load | 71.5 | 20 |
| ≥ base - < peak load | 85.1 | 25 |
| ≥ 75% - < base load | 137.3 | 50 |
| ≥ 50% - < 75% load | 308.2 | 150 |
| ≥ 25% - < 50% load | 401.7 | 300 |
| VOCs | (see Note a) | (see Note a) |
| peak load | 20.4 | 10 |
| ≥ base - < peak load | 21.4 | 11 |
| ≥ 75% - < base load | 22.0 | 14 |
| ≥ 50% - < 75% load | 29.4 | 25 |
| ≥ 25% - < 50% load | 38.3 | 50 |

Note a: measured as $CH_4$

h. The 4-hour averaging period for the applicable $NO_X$ emissions limit specified in Attachment IIA, Special Condition Nos. C.6.a and C.6.b shall include all periods of operation, including startup, shutdown, and malfunction. For operating periods during which multiple $NO_X$ emission standards specified in Attachment IIA, Special Conditions Nos. C.6.a and C.6.b apply, the applicable $NO_X$ emissions limit shall be determined in accordance with 40 CFR §60.4380(b)(3).

i. The Department of Health, with EPA's concurrence, may lower the allowable emission limitations for $NO_X$, $PM/PM_{10}$, CO, or VOCs specified in Attachment IIA, Special Condition Nos. C.6.e, C.6.f, and C.6.g after reviewing the results from the initial performance test required by Attachment IIA, Special Condition F.

j. If emission limits for $NO_X$, $PM/PM_{10}$, CO, or VOCs are revised, the difference between the applicable emission limits set forth in Attachment IIA, Special Condition Nos. C.6.e, C.6.f, and C.6.g and the revised lower emission limit shall not be allowed as an emission offset for future construction or modification.

k. For determining compliance with the applicable $NO_x$ and CO limit specified in Attachment IIA, Special Condition No. C.6.g using the continuous emissions monitoring

system (CEMS), the three-hour averaging period shall begin after the combustion turbine generator's startup sequence and end immediately prior to the combustion turbine generator's shutdown sequence. For operating periods during which multiple $NO_x$ and CO emission limits apply, the applicable emission limit shall be determined in accordance with 40 CFR Part 60, §60.4380(b)(3).

(Auth.: HAR §11-60.1-3, §11-60.1-38, §11-60.1-90, and §11-60.1-161; 40 CFR, §52.21, §60.4320, and §60.4380)[1]

7. Opacity Limits

For any six (6) minute averaging period, CIP1, CIP2, BSG1, and BSG2 shall not exhibit visible emissions of twenty (20) percent opacity or greater, except as follows: during startup, shutdown, or equipment breakdown, CIP1, CIP2, BSG1, and BSG2 may exhibit visible emissions greater than twenty (20) percent opacity but not exceeding sixty (60) percent opacity for a period aggregating not more than six (6) minutes in any sixty (60) minute period. In the event of equipment breakdown of CIP1 and CIP2, the equipment shall be shutdown within sixty (60) minutes if the opacity problem cannot be corrected within the six (6) minute period.

(Auth.: HAR §11-60.1-32 and §11-60.1-90; 40 CFR §52.21; SIP §11-60-24)[1,2]

8. Operation and Maintenance

The permittee must operate and maintain CIP1, CIP2, BSG1, BSG2, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including startup, shutdown, and malfunction. Scheduled inspections and maintenance shall be conducted as recommended by the manufacturer and as needed.

(Auth.: HAR §11-60.1-3 and §11-60.1-90; 40 CFR §52.21, §60.4320)

9. Alternate Operating Scenarios

The terms and conditions under the following alternate operating scenarios shall meet all applicable requirements including all conditions of this permit. Requests for written approval to operate under the applicable alternating scenario shall be in accordance with Attachment IIA, Special Condition No. E. 11.

a. Upon receiving written approval from the Department of Health, the permittee may operate CIP1 and CIP2 greater than ten (10) megawatts above the minimum operating load or below minimum operating load for maintenance and testing activities.

b. The permittee may operate CIP1 and CIP2 up to 110% of peak load for emergency load conditions, if equipment malfunction such as a sudden loss of a unit occurs. The time period of this operation shall not exceed 30 minutes in duration, and shall not exceed the maximum permitted emission limits. The reason for operating above peak load shall be clearly documented, with the event's date, time, duration, operating load, and resulting emission rates.

c. Upon receiving written approval from the Department of Health, CIP1 and CIP2 may be fired on fuel oil No. 2 with a maximum 0.35% by weight sulfur content for a designated length of time if it is demonstrated that fuels with 0.05% by weight or lower maximum sulfur content can be eliminated as BACT for the units based on fuel availability and/or economic impacts.

d. Upon receiving written approval from the Department of Health, CIP1 and CIP2 may be fired on alternate fuels (e.g., but not limited to, biodiesel, jet fuel, hydrogen, or ethanol instead of naphtha and fuel oil No. 2).

e. Upon receiving written approval from the Department of Health, the permittee may use specific fuel additives to control algae, lubricity, improve combustion, inhibit corrosion, or other reasons.

f. Upon receiving written approval from the Department of Health, the permittee may *replace CIP1, CIP2, BSG1, or BSG2 with an equivalent temporary replacement unit* with equal or lesser emissions in the event of a failure or major overhaul of the equipment.

(Auth.: HAR §11-60.1-3, §11-60.1-5, and §11-60.1-90)

## Section D. Monitoring and Record keeping Requirements

1. Records

All records, including support information, shall be maintained for at least five (5) years from the date of the measurement, monitoring (e.g., original strip chart or computer CEM recordings), performance test, system performance evaluation, calibration checks, adjustments, inspections, maintenance, reports, or applications. Support information includes but is not limited to all calibration, maintenance, inspection, and repair records, and copies of all reports required by this permit. These records shall be true, accurate, and maintained in a permanent form suitable for inspection and shall be made available to the Department of Health or its representative upon request.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, and §11-60.1-161; 40 CFR §52.21, §60.4360, §60.4375, §60.4400, and §60.4415)[1]

2. Startups and Shutdowns

   a. The following shall be recorded for each startup sequence of CIP1 and CIP2:

      i. The date, start and end times, and corresponding load in megawatts;
      ii. Duration of each startup in minutes; and
      iii. The total number of the startups for each day.

   b. The following shall be recorded for each shutdown sequence of CIP1 and CIP2:

      i. The date, start and end times, and corresponding load in megawatts;
      ii. Duration of the each shutdown in minutes; and
      iii. The operating load in megawatts at which the water injection system was terminated.

   (Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-11, §11-60.1-90, and §11-60.1-161; 40 CFR §52.21, §60.4335)[1]

3. Operating Load

   The following shall be recorded for CIP1 and CIP2 operating loads:

   a. The date, time, and duration of operating loads less than minimum operating load established during the most recent source performance test pursuant to Attachment IIA, Special Condition No. F.3.b; and
   b. The date, time, and duration of operating loads greater than 100% of each unit's peak capacity.

   (Auth.: HAR §11-60.1-3, §11-60.1-5, and §11-60.1-90; 40 CFR §52.21)[1]

4. Malfunctions

   The permittee shall record the date, time, description, and duration of any malfunction of CIP1, CIP2, each water injection system, and continuous monitoring system (CMS) equipment.

   (Auth.: HAR §11-60.1-3, §11-60.1-5, and §11-60.1-90; 40 CFR §52.21)[1]

5. CMS Equipment (CIP1 and CIP2)

   a. The permittee shall install, calibrate, maintain, and operate continuous emissions monitoring equipment to monitor and record the following for CIP1 and CIP2:

      i. The associated date and time of the monitored data.

ii. The operating load in megawatts. Each watt meter shall meet the requirements of 40 CFR §60.4345 and §60.4350.

iii. The fuel consumption in pounds per hour and type of fuel fired. Each fuel flow meter shall meet the requirements of 40 CFR §60.4345 and §60.4350.

iv. The ratio of water to fuel for each fuel fired (lb water/lb fuel) using a CMS to determine compliance with Attachment IIA, Special Condition No. C.5.b.

v. $NO_X$, CO, and $CO_2$ or $O_2$ concentrations in the stack gases using a continuous emissions monitoring system (CEMS) to determine compliance with Attachment IIA, Special Condition Nos. C.6.a, C.6.b, and C.6.g. The CEMS shall meet EPA performance standards as specified in Attachment IIA, Special Condition Nos. D.5.b through D.5.e. For continuous monitoring of $NO_X$ concentrations, the CEMS shall meet the additional requirements as specified in 40 CFR §60.4345 and §60.4350. Emission rates for $NO_X$ and CO shall be recorded in ppmvd at 15% $O_2$ and lbs/hr. If a $CO_2$ CEMS is used, the $CO_2$ correction factor equations listed in 40 CFR §60.4213(d)(3) shall be used.

vi. *Stack percent opacity using a continuous opacity monitoring system (COMS) to* determine compliance with Attachment IIA, Special Condition No. C.7. The COMS shall meet EPA monitoring performance standards as specified in Attachment IIA, Special Condition Nos. D.5.b and D.5.c.

b. The procedures under 40 CFR, Part 60, §60.13 shall be followed for installation, evaluation, and operation of the CMS.

c. The CMS shall be operated according to the performance specifications of 40 CFR, Part 60, Appendix B.

d. Calibration drift (CD) tests shall be conducted on a daily basis in accordance with 40 CFR, Part 60, Appendix F.

e. Quarterly accuracy audits shall be performed in accordance with 40 CFR, Part 60, Appendix F. Successive quarterly accuracy audits shall occur no closer than two months apart. The audits shall be conducted as follows:

i. The relative accuracy test audit (RATA) shall be performed in accordance with 40 CFR §60.4345 and must be conducted at least once every four calendar quarters. Conduct the RATA as described for the RA test procedure from the applicable performance standard in Appendix B of 40 CFR, Part 60.

ii. In addition, analyze the appropriate performance audit samples received from EPA as described in the applicable sampling methods.

iii. A cylinder gas audit (CGA) may be conducted in three of four calendar quarters, but in no more than three quarters in succession.

f. The water-to-fuel ratio and minimum operating load as specified in Attachment IIA, Special Condition No. F.3.b or other parameters that are continuously monitored as described in Attachment IIA, Special Condition No. D.5.a must be monitored during the performance test to establish acceptable values and ranges. The permittee may supplement the performance test data with engineering analyses, design specifications, manufacturer's recommendations, and other relevant information to define acceptable parametric ranges more precisely. The permittee shall develop and keep on-site a parameter monitoring plan which explains the procedures used to document proper operation of the $NO_X$ emission controls.

(Auth.: HAR §11-60.1-3, §11-60.1-5§11-60.1-11, §11-60.1-90, and §11-60.1-161; 40 CFR §52.21, §60.4345, §60.4350, and §60.4355, 40 CFR, Part 60, Appendix F)[1]

6. Fuel Consumption and Sampling

a. Records from the continuous monitoring systems specified in Attachment IIA, Special Condition No. D.5 shall be maintained on the total amount (pounds) of each fuel fired by CIP1 and CIP2 on a monthly and rolling twelve-month (12-month) basis.

b. Records on the sulfur content (% by weight) and higher heating value (HHV) in Btu/lb shall be maintained for CIP1 and CIP2 for each fuel fired. For the fuel sulfur content and HHV, one of the sampling options and associated sampling frequency specified in Sections 2.2.3, 2.2.4.1, 2.2.4.2, and 2.2.4.3 of Appendix D to Part 75 of 40 CFR shall be used. The fuel analyses may be performed either by the permittee, the fuel vendor, or any other qualified agency. The samples shall be analyzed for the total sulfur content of the fuel using ASTM D129, or alternatively D1266, D1552, D2622, D4294, or D5453 (all of which are incorporated by reference, see §60.17). Records from the pounds of fuel fired and fuel's HHV shall be used to determine the total combined firing rate in MMBtu for CIP1 and CIP2 on a monthly and rolling twelve month (12-month) basis.

c. Records shall be maintained on the sulfur content (percent by weight), cetane index or aromatic content (volume percent), and the total amount (gallons) of fuel fired by BSG1 and BSG2. The total gallons of fuel fired shall be determined from logs on the quantity of fuel transferred to the storage tank servicing BSG1 and BSG2. Fuel sulfur content and cetane index or aromatic content (volume percent) may be demonstrated by providing the supplier's fuel specification sheet for the fuel received.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-11, §11-60.1-90, and §11-60.1-161; SIP §11-60-15; 40 CFR §60.4360 and §60.4365)[1, 2]

7. Operating Hours

A non-resetting hour meter shall be installed, operated, and maintained on BSG1 and BSG2 for the continuous and permanent recording of the hours operated. The non-resetting hour meter shall not allow the manual resetting or other manual adjustments of the meter readings. The installation of any new non-resetting meters or the replacement of any existing non-resetting meters shall be designed to accommodate a minimum of five (5) years of equipment operation, considering any operational limitations, before the meter returns to a zero reading. Records shall be kept that include the following:

a. The date of the meter readings;
b. Beginning meter readings for each month;
c. The total hours operated for each month; and
d. The total hours operated on a twelve-month (12-month) rolling basis.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-11, and §11-60.1-90)

8. Alternate Operating Scenarios

a. The permittee shall contemporaneously with making a change from one operating scenario to another in accordance with Attachment IIA, Special Condition No. C.9., record in a log at the permitted facility the scenario under which it is operating.

b. The permittee shall maintain all records corresponding to the implementation of an alternate operating scenario specified in Attachment IIA, Special Condition No. C.9.

(Auth.: HAR §11-60.1-3, §11-60.1-5, and §11-60.1-90)

9. Post-Construction Ambient Air Quality Monitoring

a. The permittee shall install, operate, and maintain an ambient air quality monitoring station for $SO_2$, $NO_2$, CO, $PM_{10}$, and ozone. The monitoring period shall commence **within sixty (60) days after** the completion of construction, or if the monitoring plan is disapproved, the monitoring period shall commence within sixty (60) days after approval and shall continue for a minimum of one (1) year. The data recovery should be at least eighty (80) percent of the data possible for each air pollutant during the monitoring period. The monitoring station shall continue to operate and record data until such time that written approval is obtained from the Department of Health *authorizing the termination of its operation.*

b. The permittee shall install, operate, and maintain a meteorological monitoring station to monitor and record data. Data shall include horizontal wind speed and direction, and temperature. Each month's data recovery should be at least eighty (80) percent of the data possible for each variable measured during the monitoring period. An

alternative meteorological monitoring station may be used in lieu of the required monitoring station provided that approval of the monitoring station is obtained from the Department of Health. The monitoring period shall commence **within sixty (60) days** after the completion of construction, or if the monitoring plan is disapproved, the monitoring period shall commence within sixty (60) days after approval and shall continue for a minimum of one (1) year. The monitoring station shall continue to operate and record data until such time that written approval is obtained from the Department of Health authorizing the termination of its operation.

(Auth.: HAR §11-60.1-3, §11-60.1-13, §11-60.1-90, §11-60.1-143; 40 CFR §52.21)[1]

10. Maintenance

An inspection, maintenance, and repair log shall be maintained for CIP1, CIP2, BSG1, and BSG2.

(Auth.: HAR §11-60.1-3, §11-60.1-5,§11-60.1-11, and §11-60.1-90; 40 CFR §52.21)[1]

11. Performance Testing

Performance testing of CIP1 and CIP2 shall be in accordance with Attachment IIA, Section F.

(Auth.: HAR §11-60.1-3, §11-60.1-5,§11-60.1-11, §11-60.1-90, and §11-60.1-161; 40 CFR §52.21; SIP §11-60.1-15)[1,2]

12. Visible Emissions

Although not required at this time, the Department of Health, if so desires, may at any time require the permittee to conduct monthly and annual visible emissions monitoring for BSG1 and BSG2.

(Auth.: HAR §11-60.1-3, §11-60.1-5, and §11-60.1-90)

## Section E. Notification and Reporting Requirements

1. Standard Condition Reporting

Notification and reporting pertaining to the following events shall be done in accordance with Attachment I, Standard Condition Nos. 14, 16, 17, and 24, respectively:

a. Anticipated date of initial startup, actual date of construction commencement, and actual date of startup of CIP1, CIP2, BSG1, and BSG2;

b. Intent to shut down air pollution control equipment for necessary scheduled maintenance;
c. Emissions of air pollutants in violation of HAR, Chapter 11-60.1 or this permit (excluding technology-based emission exceedences due to emergencies); and
d. Permanent discontinuance of construction, modification, relocation, or operation of the facility covered by this permit.

(Auth.: HAR §11-60.1-8, §11-60.1-15, §11-60.1-16, §11-60.1-90; 40 CFR §52.21; SIP §11-60-10; SIP §11-60-16)[1,2]

2. Deviations

The permittee shall report in writing **within five (5) working days** any deviations from permit requirements, including those attributed to upset conditions, the probable cause of such deviations, and any corrective actions or preventive measures taken. Corrective actions may include a requirement for additional performance testing, or more frequent monitoring, or could trigger implementation of a corrective action plan.

(Auth.: HAR §11-60.1-3, §11-60.1-15, §11-60.1-16, and §11-60.1-90; 40 CFR §52.21)[1]

3. Excess Emissions, Deviations, and Monitor Downtime (CIP1 and CIP2)

a. The permittee shall submit to the Department of Health and U.S. EPA, Region 9, reports of excess emissions, monitor downtime, and water-to-fuel mass ratio deviations in accordance with 40 CFR, Part 60, §60.7(c). An **excess emissions and monitor systems performance report** shall be **postmarked by the 30th day following the end of each six-month (6-month) period**. Excess emissions shall be for all periods of operation, including startup, shutdown, and malfunction. Water-to-fuel mass ratio deviations shall be for all periods of operation, except for startup and shutdown sequences. For the purpose of the excess emissions and the monitoring system performance report required under §60.7(c), periods of excess emissions, water-to-fuel mass ratio deviations, and monitor downtime shall be reported as follows:

i. CMS Servicing Water Injection System

1) A water-to-fuel mass ratio deviation recorded from the CMS shall be any unit operating hour for which the average water to fuel ratio, as measured by the CMS, falls below the acceptable water-to-fuel ratio needed to demonstrate compliance with the $NO_X$ emissions standards specified in Attachment IIA, Special Condition Nos. C.6.a, C.6.b, and C.6.g as established during performance testing pursuant to Attachment IIA, Special Condition F.

2) A period of monitor downtime shall be any unit operating hour in which water is injected into the combustion turbine, but the essential parametric data needed to determine the water-to-fuel ratio are unavailable or invalid.

3) Reports shall include the following during each excess emission:

a) Average water to fuel ratio;
b) Average fuel consumption and type of fuel;
c) Combustion turbine generator load in megawatts;
d) The magnitude of the water-to-fuel mass ratio deviations recorded by the CMS that are determined in accordance with 40 CFR, Part 60, §60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of the deviations;
e) Except for the nature of the system repairs or adjustments of the CMS, specific identification of each period of water-to-fuel mass ratio deviation *that occurs during malfunctions, the nature and cause of any malfunction* (if known), and corrective action taken or preventive measures adopted;
f) The date and time identifying each period during which the CMS was inoperative and the nature of the system repairs or adjustments; and
g) When no water-to-fuel mass ratio deviations have occurred or the CMS has not been inoperative, repaired, or adjusted, such information shall be stated in the report.

ii. CEMS for $NO_X$ and CO

1) An hour of excess emissions shall be any unit operating hour for which the 4-hour rolling average $NO_X$ concentration, exceeds the emission levels specified in Attachment IIA, Special Condition Nos. C.6.a and C.6.b. A 4-hour rolling average $NO_X$ emission rate is the arithmetic average of the average $NO_X$ emission rate in ppm measured by the CEMS for a given hour and the three (3) unit operating hour average $NO_X$ emission rates immediately preceding that unit operating hour. Calculate the rolling average if a valid $NO_X$ emission rate is obtained for at least three (3) of the four (4) hours. A unit operating hour is any clock hour during which any fuel is combusted in the combustion turbine generator.

2) An hour of excess emissions shall be any unit operating hour in which the 3-hour rolling average $NO_X$ and CO concentration exceeds the emission levels specified in Attachment IIA, Special Condition No. C.6.g.

3) A period of monitor downtime shall be any unit operating hour in which the data for any of the following parameters are either missing or invalid: $NO_X$ concentration, CO concentration, $CO_2$ or $O_2$ concentration, fuel flow rate, or megawatts.

4) Each report shall include the following:

a) The magnitude of the excess emissions determined in accordance with 40 CFR, Part 60, §60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions;
b) Except for zero and span checks and nature of the system adjustments of the CEMS, specific identification of each period of excess emissions that occur during startups, shutdowns, and malfunctions, the nature and cause of any malfunction (if known), and the corrective action taken or preventive measures adopted;
c) The date and time identifying each period during which the CEMS was inoperative, except for zero and span checks, and the nature of the system repairs or adjustments; and
d) When no excess emissions have occurred or the CEMS has not been inoperative, repaired, or adjusted, such information shall be stated in the report.

iii. COMS

1) An excess emission is any opacity, as measured by the transmissometer continuous monitoring system, exceeding the opacity limits and 6-minute averaging periods specified in Attachment IIA, Special Condition No. C.7, except when fuel is not flowing to the combustion turbine generator if it can be demonstrated that the opacity exceedance is attributed to non-combustion sources.

2) A period of monitor downtime shall be any 6-minute period in which sufficient data are not obtained to validate the opacity.

3) Each report shall include the following:

a) The magnitude of excess emissions as determined in accordance with 40 CFR, Part 60, §60.13(h), any conversion factor(s) used, and, the date and time of commencement and completion of each time period of excess emissions and monitor downtime;
b) Except for the nature of the system repairs or adjustments of the COMS, specific identification of each period of excess emissions and monitor downtime that occurs during startups, shutdowns, and malfunctions, the nature and cause of any malfunction (if known), and the corrective action taken or preventive measures adopted;
c) The date and time identifying each period during which the COMS was inoperative and the nature of the system repairs or adjustments; and

d) When no excess emissions have occurred or the COMS has not been inoperative, repaired, or adjusted, such information shall be stated in the report.

iv. Fuel Sulfur Content Sampling

1) For fuel samples obtained using daily sampling, flow proportional sampling, or sampling from the combustion turbine generator's storage tank, an excess emission occurs each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the fuel being fired in the combustion turbine exceeds the applicable limit and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit.

2) For sampling each delivery of fuel prior to combining it with fuel already in the intended storage tank, the permittee must immediately switch to one of the other sampling options specified in Sections 2.2.3, 2.2.4.1, and 2.2.4.2 of Appendix D to 40 CFR Part 75 if the fuel sulfur content exceeds the applicable limit specified in Attachment IIA, Special Condition No. C.1.a. The permittee must continue to use either of the aforementioned sampling options and evaluate excess emissions in accordance with 40 CFR 60.4385 (a) until all of the fuel from the delivery has been combusted. When all the fuel from the delivery has been combusted, the permittee may resume sampling in accordance with 40 CFR Part 75, Section 2.2.4.3.

3) A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime shall include only unit operating hours, and ends on the date and hour of the next valid sample.

b. Excess emissions and water-to-fuel mass ratio deviations shall be considered violations of the applicable permit limit. Operation of CIP1 and CIP2 shall be in a manner consistent with good air pollution control practice for minimizing emissions at all times. Excess emissions data may be used to determine whether a facility's operation and maintenance procedures are consistent with this requirement.

The attached **Excess Emissions and Monitoring System Performance Summary Report Form** shall be submitted in conjunction with a separate semi-annual **excess emissions and monitoring systems performance report** as required by Attachment IIA,

Special Condition No. E.3.a. One summary report shall be submitted for each pollutant monitored and for each combustion turbine generator unit.

(Auth.: HAR §11-60.1-3, §11-60.1-90, and §11-60.1-161; 40 CFR §52.21, §60.7, §60.13, §60.4375, §60.4380, and §60.4385)[1]

4. Performance Testing and Demonstration

Notification of the following for CIP1 and CIP2 shall be **postmarked not less than thirty (30) days prior** to such date:

a. The date upon which demonstration of the performance of the continuous monitoring systems (CMS servicing each water injection system, CEMS, and COMS) commence in accordance with 40 CFR §60.13. A plan to demonstrate performance of the systems shall accompany each notification.

b. The date of conducting a source performance test as required by Attachment IIA, Section F. A performance test plan as specified in Attachment IIA, Special Condition No. F.5 shall accompany the notification.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §52.21, §60.8, and §60.13)[1]

5. CGA and RATA Test Reports

*All quarterly accuracy audits of the CEMS involving CGA and RATA test reports shall be* submitted within thirty (30) days after the end of each semi-annual calendar period (January 1 to June 30 and July 1 to December 31).

(Auth.: HAR §11-60.1-3,§11-60.1-5, §11-60.1-11, and §11-60.1-90; 40 CFR §52.21 and Part 60, Appendix F and )[1]

6. Performance Test Reports

**Within sixty (60) days** after completion of a source performance test, the permittee shall submit the test report results as specified in Attachment IIA, Special Condition No. F.6.

(Auth.: HAR §11-60.1-3, §11-60.1-11, and §11-60.1-90; 40 CFR §52.21 and §60.8)[1]

7. Compliance Certification

During the permit term, the permittee shall submit at least **annually** to the Department of Health and U.S. EPA, Region 9, the attached **Compliance Certification Form** pursuant to HAR, Subsection 11-60.1-86. The permittee shall indicate whether or not compliance is

being met with each term or condition of this permit. The compliance certification shall include, at a minimum, the following information:

a. The identification of each term or condition of the permit that is the basis of the certification;
b. The compliance status;
c. Whether compliance was continuous or intermittent;
d. The methods used for determining the compliance status of the source currently and over the reporting period;
e. Any additional information indicating the source's compliance status with any applicable enhanced monitoring and compliance certification, including the requirements of Section 114(a)(3) of the Clean Air Act or any applicable monitoring and analysis provisions of Section 504 (b) of the Clean Air Act;
f. Information as required by 40 CFR Part 70, §70.6(c)(5)(iii); and
g. Any additional information as required by the Department of Health, including information to determine compliance.

The compliance certification shall be submitted within **ninety (90) days after** the end of each calendar year and shall be signed and dated by a responsible official.

Upon the written request of the permittee, the deadline for submitting the compliance certification may be extended, if the Department of Health determines that reasonable justification exists for the extension.

(Auth.: HAR §11-60.1-4, §11-60.1-86, and §11-60.1-90; 40 CFR §52.21)[1]

8. Annual Emissions

As required by Attachment IV and in conjunction with the requirements of Attachment III, Annual Fee Requirements, the permittee shall submit **annually** the total tons per year emitted of each regulated air pollutant, including hazardous air pollutants. The reporting of annual emissions is due **within sixty (60) days following** the end of each calendar year. The enclosed **Annual Emissions Report Form: CIP1 and CIP2** and **Annual Emissions Report Form: BSG1 and BSG2**, shall be used for reporting.
Upon the written request of the permittee, the deadline for reporting annual emissions may be extended, if the Department of Health determines that reasonable justification exists for the extension.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, and §11-60.1-114)

9. Monitoring Reports

The permittee shall submit **semi-annually** the following reports to the Department of Health. The reports shall be submitted **within sixty (60) days after** the end of each

semi-annual calendar period (January 1-June 30 and July 1-December 31), and shall include the following:

a. CIP1 and CIP2 Startup and Shutdown

i. Dates, times, and durations when the startup or shutdown sequence was greater than sixty (60) minutes;
ii. Date and number of startups exceeding a maximum of four startups per day; and
iii. Dates, times, and durations when the water injection system was not operated in accordance with that specified in Attachment IIA, Special Condition No. C.5 for startups and shutdowns.

b. CIP1 and CIP2 Operating Loads

i. Dates, times, and durations when the combustion turbine generators were operating below minimum operating load at periods other than startup, shutdown, and those approved pursuant to Attachment IIA, Special Condition No. C.9.a; and
ii. Dates, times, and durations the combustion turbine generators were operating above peak load at periods other than those approved pursuant to Attachment IIA, Special Condition No. C.9.b.

c. CIP1, CIP2, and Air Pollution Control Device Malfunctions

Dates, times, and duration of any malfunction in the operation of the combustion turbine generators, each water injection system, and continuous monitoring system servicing CIP1 and CIP2.

d. Alternate Operating Scenarios

i. A record of alternate operating scenarios implemented;
ii. A statement indicating whether or not applicable permit requirements have been met; and
iii. Any supporting data as required by Attachment IIA, Special Condition Nos. C.9.a through C.9.f.

e. Fuel Information

i. The sulfur content (percent by weight) and HHV (Btu/lb) of each fuel fired by CIP1 and CIP2;
ii. The pounds of fuel fired by CIP1 and CIP2 on a monthly basis;
iii The total combined firing rate of CIP1 and CIP2 based on the pounds of each fuel fired and each fuel's HHV (Btu/lb) on a twelve-month (12-month) rolling basis;
iv. The sulfur content (percent by weight) and cetane index or aromatic content (volume percent) of fuel fired by BSG1 and BSG2; and
v. The gallons of fuel fired by BSG1 and BSG2.

f. Operating Hours

i. Operating hours for BSG1 as determined by its non-resetting hour meter; and
ii. Operating hours for BSG2 as determined by its non-resetting hour meter.

The enclosed **Monitoring Report Form: CIP1 and CIP2 Operation** shall be completed for each month during the reporting period and submitted on a semi-annual basis. The enclosed **Monitoring Report Form: CIP1, CIP2, BSG1, and BSG2 Fuel Sulfur Content**, **Monitoring Report Form: BSG1 and BSG2 Operating Hours**, and **Monitoring Report Form: CIP1 and CIP2 Firing Rate** shall be completed and submitted on a semi-annual basis.

(Auth.: HAR §11-60.1-11, §11-60.1-90; §11-60.1-161; 40 CFR §52.21)[1]

10. Post-Construction Ambient Air Quality and Meteorological Monitoring

a. **At least sixty (60) days prior** to the completion of construction of Campbell Industrial Park Generating Station, the permittee shall submit to the Department of Health for approval an ambient air quality and meteorological monitoring plan for the post-construction monitoring requirements specified in Attachment IIA, Special Condition No. D.9. The plan shall include the proposed siting location.

b. The permittee shall submit on a **monthly basis**, a printed summary of the ambient air quality and meteorological monitoring data collected in each calendar month. The summary shall be submitted **within sixty (60) days after** the end of each calendar month.

c. As required by EPA guidance, the permittee shall submit audit reports. Quarterly and semi-annual audit periods shall be based on a calendar year and submitted **within sixty (60) days after** the following events:

i. Completion of the post-installation equipment audit;
ii. Completion of the independent performance and system audits;
iii. Completion of the quarterly audits required for the ambient air quality data collection system; and
iv. Completion of the semi-annual audits required for the meteorological data collection system.

d. **Within ninety (90) days after** the end of each calendar year and following the completion of the collection of monitoring data, the permittee shall submit to the Department of Health annual/final reports in text (i.e., summary), tabular, and graphic forms, including data in digitized format. The digitized form of the measured air quality and meteorological data shall be in: (1) EPA Air Quality System (AQS) format and

(2) ASCII format accessible by an IBM compatible PC. **Within ninety (90) days after completion of data collection**, the permittee shall also submit the final report for the system and performance audit required prior to monitoring termination.

(Auth.: HAR §11-60.1-3, §11-60.1-13, §11-60.1-90, and §11-60.1-143; 40 CFR §52.21)[1]

11. Alternate Operating Scenarios

a. For written request to operate CIP1 and CIP2 at load levels greater than ten (10) megawatts above the minimum operating load or below minimum operating load, the permittee shall, at a minimum, provide the Department of Health the date and time period for testing and maintenance, reason why it is necessary to operate outside of load range specified in Attachment IIA, Special Condition Nos. A.3.a and C.4.a, procedures to be taken to minimize testing or maintenance at loads outside the specified range, maximum expected emissions, and any other supporting information as requested by the Department of Health. The Department of Health may require an ambient air quality impact assessment for the combustion turbine generators at the other load levels, and/or provide a conditional approval to limit the maintenance and testing period, and impose additional monitoring, record keeping, and reporting requirements.

b. Written request for firing CIP1 and CIP2 on fuel oil No. 2 with maximum 0.35% by weight sulfur content shall specify the period of time during which the fuel is fired by the units, the maximum fuel sulfur content, and reason for eliminating fuels with lower sulfur content as BACT based on availability or economic impacts. Upon written request, the period of time during which fuel oil No. 2 with maximum 0.35% by weight sulfur content is fired as the primary fuel may be extended, if the Department of Health determines that reasonable justification exists for the extension.

c. In requesting for approval to fire CIP1 and CIP2 on alternate fuels, the permittee shall, at a minimum, provide the Department of Health with information on the type of fuel proposed, reason for using the alternate fuel, emissions data, and the manufacturer's recommended water-to-fuel ratio and minimum operating load for compliance with the emission limits. The Department of Health may require an ambient air quality impact assessment for firing the alternate fuel and/or provide a conditional approval to impose additional monitoring, testing, record keeping, and reporting requirements. The Department of Health may establish minimum water-to-fuel ratio conditions in the permit for firing CIP1 and CIP2 on alternate fuels.

d. For written requests to use fuel additives, the permittee shall, at a minimum, provide the Department of Health the specifications of the fuel additive(s), maximum expected emission rates of any criteria or non-criteria pollutant, certification that corresponding emission rates will not exceed permitted rates, and any other information requested by the Department of Health. The Department of Health may provide a conditional

approval to impose additional monitoring, testing, record keeping, and reporting requirements to ensure the use of the fuel additive is in compliance with the applicable requirements.

e. Written requests submitted to the Department of Health for exchanging each permitted combustion turbine generator or black start diesel engine generator with a temporary replacement unit shall identify, at a minimum, the reasons for the replacement of the primary unit from the site of operation and estimated time period/dates for the temporary replacement unit, type and size of the temporary unit, the replacement unit's emissions data and stack parameters, and measures for minimizing the time period needed for the temporary unit. The Department of Health may require an ambient air quality impact assessment of the temporary unit, and/or provide conditional approval to impose additional monitoring, testing, record keeping, and reporting requirements to ensure the temporary unit is in compliance with the applicable requirements of the permitted unit being temporarily replaced.

f. Prior to the removal and return of each combustion turbine generator or black start diesel engine generator replaced by another unit, the permittee shall submit to the Department of Health written documentation on the removal and return dates and the make, size, model number, and serial number for the temporary replacement unit and the permitted unit.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90)

## Section F. Testing Requirements

1. Initial and Annual $NO_X$, CO, PM, and VOC Performance Testing

**Within sixty (60) days after** achieving the maximum production rate at which CIP1 and CIP2 will be operated, but **not later than one-hundred eighty (180) days after** the initial startup of CIP2 or switching to a fuel not already performance tested for CIP1 or CIP2 and annually (no more than 14 calendar months following the previous performance test) thereafter, the permittee shall conduct or cause to be conducted performance tests on the combustion turbine generators for $NO_X$, CO, PM, particulate matter less than 2.5 microns in diameter ($PM_{2.5}$), and VOCs. The performance tests shall be conducted to provide additional information on particulate emissions and to determine compliance with limits specified in Attachment IIA, Special Condition Nos. C.6.a, C.6.b, C.6.e, C.6.f, C.6.g, and C.7. The three-run performance tests to determine compliance with limits specified in Attachment IIA, Special Condition Nos. C.6.a, C.6.b, C.6.e, C.6.f, and C.6.g shall be performed at minimum operating load (established during performance tests), 50% of peak load, 75% of peak load, and 90 to 100% of peak load, or at the highest achievable load point if 90% to 100% of peak load cannot be physically achieved by the units, or at other operating loads as specified by the Department of Health. Performance testing shall be

conducted for the units fired on the primary fuel at the time of the tests or other fuels as specified by the Department of Health. The Department of Health may also define specific water-to-fuel ratios which the performance test will be conducted.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, and §11-60.1-161; 40 CFR §52.21, §60.8, §60.4400, and §60.4405; SIP §11-60.6)[1, 2]

2. Initial and Annual $SO_2$ Performance Testing

   a. **Within sixty (60) days after** achieving the maximum production rate at which CIP1 and CIP2 will be operated, but **not later than one-hundred eighty (180) days after** the initial startup of CIP2 or switching to a fuel not already performance tested for CIP1 or CIP2, the permittee shall conduct or cause to be conducted an initial performance test on the combustion turbine generators for $SO_2$. The performance test shall be conducted to determine compliance with the applicable emission limits specified in Attachment IIA, Special Condition Nos. C.6.c and C.6.d. The three-run performance test shall be performed at minimum operating load (established during performance tests), 50% of peak load, 75% of peak load, and 90% to 100% of peak load, or at the highest achievable load point if 90% to 100% of peak load cannot be physically achieved by the combustion turbine generators, or at other operating loads as specified by the Department of Health.

   b. The permittee shall conduct annually (no more than 14 calendar months following the previous performance test) performance tests on the combustion turbine generators to determine compliance with the applicable standard specified in Attachment IIA, Special Condition No. C.1.a. Testing shall be performed by collecting and analyzing fuel samples for sulfur content in accordance with 40 CFR §60.4415. Performance testing shall be conducted for the units fired on the primary fuel at the time of the test or other fuels as specified by the Department of Health.

   (Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §52.21, §60.8, and §60.4415; SIP §11-60.6)[1, 2]

3. Performance Test Methods

   The performance tests shall be conducted and the results reported in accordance with the test methods set forth in 40 CFR, Part 60, Appendix A, and 40 CFR, Part 60, Section 60.8. The following test methods, or EPA approved equivalent methods shall be used. The following methods/provisions shall be used, as applicable, to determine the mass emission rates, concentrations, and opacity:

   a. EPA Methods 1 through 4 shall be performed for sample sites and number of traverse sites, gas velocity and volumetric flow rate, gas analysis, and determining moisture in stack gases.

b. The $NO_x$ emissions shall be conducted using EPA Method 20 or the applicable alternative methods specified for EPA Methods 1 and 20 in 40 CFR §60.4400. The continuous monitoring system for the water injection system shall operate concurrently with each EPA Method 20 run and shall be used to determine the fuel consumption, minimum operating load, and the water-to-fuel ratio necessary to comply with the $NO_X$ emission limits specified in Attachment IIA, Special Condition Nos. C.6.a, C.6.b, and C.6.g.

c. The CO emissions shall be conducted using EPA Method 10. The continuous monitoring system for the water injection system shall operate concurrently with each EPA Method 10 run and shall be used to determine the fuel consumption, minimum operating load, and the water-to-fuel ratio necessary to comply with the CO emission limits specified in Attachment IIA, Special Condition No. C.6.g.

d. The PM emissions shall be determined with EPA Method 5 for the filterable portion and EPA Method 202 for the condensable portion.

e. The $PM_{10}$ emissions shall be determined with EPA Methods 5 or 201A for the filterable portion and EPA Method 202 for the condensable portion.

f. The $PM_{2.5}$ emissions (lb/hr and ppmvd @ 15% $O_2$) shall be determined with EPA Methods 5 or Other Test Method (OTM)-27 for the filterable portion and EPA Method OTM-28 for the condensable portion.

g. The VOC emissions shall be conducted using EPA Method 18 to measure VOC emissions in conjunction with EPA Method 25A for subtracting exempt VOC contributions.

h. The initial performance test for the emissions of $SO_2$ shall be conducted using 40 CFR Part 60, Method 20.

i. Subsequent $SO_2$ performance tests after initial testing shall be performed by collecting a representative fuel sample following ASTM D4057 (incorporated by reference, see §60.17). The fuel analyses may be performed either by the permittee, the fuel vendor, or any other qualified agency. The samples shall be analyzed for the total sulfur content of the fuel using ASTM D129, or alternatively D1266, D1552, D2622, D4294, or D5453 (all of which are incorporated by reference, see §60.17).

j. Performance tests to determine the mass emission rates and concentrations shall consist of three (3) separate runs using the applicable test method. For the purpose of determining compliance with an applicable limit, the arithmetic mean of the results from the three (3) runs shall apply.

k. Compliance with opacity standards shall be determined with COMS data collection of 6-minute continuous periods in accordance with 40 CFR §60.11(e)(5) within the duration of the performance tests to determine compliance with the emissions limits.

l. Any deviations from these conditions, test methods, or procedures may be cause for rejection of the test results unless such deviations are approved by the Department of Health before the tests.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-11, and §11-60.1-90; 40 CFR §52.21, §60.8, §60.11(e)(5), §60.4400, and §60.4415; SIP §11-60-15)[1,2]

4. *Continuous Monitoring Systems*

a. All continuous monitoring systems and monitoring devices shall be installed and operational prior to conducting performance tests. Verification of operational status shall, at a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device.

b. Performance evaluations of the CEMS servicing CIP1 and CIP2 shall be conducted at least once every four calendar quarters in accordance with the applicable performance specification in 40 CFR, Part 60, Appendix B. The performance evaluation of the CEMS shall be conducted during any performance test, or within thirty (30) days thereafter, or at other times as required by the Department of Health.

c. The permittee shall conduct a performance evaluation of the COMS as specified in Performance Specification 1, 40 CFR, Part 60, Appendix B before the performance test is required. Otherwise, the permittee shall conduct a performance evaluation of the COMS during any performance test or within thirty (30) days thereafter, or at other times as required by the Department of Health.

(Auth.: HAR §11-60.1-3, §11-60.1-5, and §11-60.1-11, 40 CFR §60.11(e)(5) and §60.13(c))[1]

5. Performance Test Plan

**At least thirty (30) calendar days prior** to performing a test, the permittee shall submit a written performance test plan to the Department of Health and U.S. EPA, Region 9, that includes the date(s) of the test, test duration, test locations, test methods, source operation and other parameters that may affect test results. Such a plan shall conform to EPA guidelines including quality assurance procedures. A test plan or quality assurance plan

that does not have the approval of the Department of Health may be grounds to invalidate any test and require a retest.

(Auth.: HAR §11-60.1-11, §11-60.1-90, and §11-60.1-161; 40 CFR §60.8; SIP §11-60-15)[1,2]

6. Performance Test Report

**Within sixty (60) days after** completion of the performance test, the permittee shall submit to the Department of Health and U.S. EPA, Region 9, the test report which shall include the operating conditions of the combustion turbine generators at the time of the test, the analysis of the fuel, the summarized test results, comparative results with the permit emission limits, and other pertinent field and laboratory data.

(Auth.: HAR §11-60.1-11 and §11-60.1-90; 40 CFR §60.8; SIP §11-60-15) [1, 2]

7. Testing Expense and Monitoring

The permittee shall provide sampling and testing facilities at its own expense. All performance tests may be monitored by the Department of Health.

(Auth.: HAR §11-60.1-5, §11-60.1-11, and §11-60.1-90; 40 CFR §60.4400 and §60.4415 SIP §11-60-15) [1, 2]

8. Performance Test Waiver

Except for annual performance testing for $NO_X$ and $SO_2$, upon written request and justification, the Department of Health may waive the requirement for a specific annual source performance test for the combustion turbine generators. The waiver request is to be submitted prior to the required test and must include documentation justifying such action. Documentation should include, but is not limited to, the results of the prior tests indicating compliance by a wide margin, documentation of continuing compliance, and further that operations of the source have not changed since the previous source test.

(Auth.: HAR §11-60.1-11 and §11-60.1-90, 40 CFR §60.4400 and §60.4415)[1]

**Section G. Agency Notification**

1. Any document (including reports) required to be submitted by this permit shall be done in accordance with Attachment I, Standard Conditions, Condition No. 30.

   (Auth.: HAR §11-60.1-4 and §11-60.1-90)

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[1] The citations to the CFR identified under a particular condition, indicate that the permit condition complies with the specified provision(s) of the CFR. Due to the integration of the preconstruction and operating permit requirements, permit conditions may incorporate more stringent requirements than those set forth in the CFR.

[2] The citations to the State Implementation Plan (SIP) identified under a particular condition, indicate that the permit condition complies with the specified provision(s) of the SIP.

**ATTACHMENT IIB: SPECIAL CONDITIONS - STORAGE TANKS**
**COVERED SOURCE PERMIT NO. 0548-01-C**

**Issuance Date: February 24, 2010** **Expiration Date: May 21, 2012**

In addition to the standard conditions of the covered source permit, the following special conditions shall apply to the permitted facility:

## Section A. Equipment Description

1. Attachment IIB of this permit encompasses the following storage tanks:

| Tank No. | Working Volume (gallons) | Tank Description |
|---|---|---|
| 1 | 1,880,000 | fixed roof with internal floating roof |
| 2 | 1,880,000 | fixed roof with internal floating roof |

(Auth.: HAR §11-60.1-3)

2. The permittee shall identify the tank number and product type for each storage tank. The identification number and product type shall be displayed on each tank at a conspicuous location.

(Auth.: HAR §11-60.1-5)

## Section B. Applicable Federal Regulations

1. Storage Tank Nos. 1 and 2 are subject to the provisions of the following federal regulations and Attachment IIB of this covered source permit only when the tanks store a liquid with a maximum true vapor pressure greater than or equal to 3.5 kilopascals (approximately 0.507 pounds per square inch):

   a. 40 CFR, Part 60, Standards of Performance for New Stationary Sources, Subpart A - General Provisions; and
   b. 40 CFR, Part 60, Standards of Performance for New Stationary Sources, Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984.

(Auth.: HAR §11-60.1-3, §11-60.1-90, and §11-60.1-161; 40 CFR §60.2 and 60.110b)[1]

2. The permittee shall comply with all applicable provisions of these standards, including all emissions limits and all notification, testing, monitoring, and reporting requirements. The major requirements of these standards are detailed in the special conditions of this covered source permit.

(Auth.: HAR §11-60.1-3, §11-60.1-90, and §11-60.1-161)

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**Expiration Date: May 21, 2012**

## Section C. Operational Limitations

1. Tank Nos. 1 and 2 Construction and Operation

   The storage tanks shall have a fixed roof with an internal floating roof and meet the following specifications:

   a. The true vapor pressure of the volatile organic liquid (VOL) stored shall be maintained below 11 psia at all times.

   b. The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside the fixed roof storage tank. The internal floating roof shall be floating on the liquid surface at all times except during initial fill and during those intervals when the storage tank is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.

   c. The storage tanks shall be equipped with one of the following closure devices between the wall of the storage tank and the edge of the internal floating roof:

      i. A foam or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal);
      ii. Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage tank and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous; or
      iii. A mechanical shoe seal.

   d. Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and rim space vents is to provide a projection below the liquid surface.

   e. Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.

   f. Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports.

g. Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting.

h. Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening.

i. Each penetration of the internal floating roof that allows for the passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.

j. Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

(Auth.: HAR §11-60.1-3, §11-60.1-39, §11-60.1-90, and §11-60.1-161; 40 CFR 60.112b)[1]

## Section D. Monitoring and Record keeping Requirements

1. Records

Except for the record required by Attachment IIB, Special Condition No. D.6.d, the permittee shall maintain records, including support information, at the facility for at least five (5) years from the date of the monitoring samples, measurements, tests, reports, or application. Support information includes all maintenance, inspection, and repair records, and copies of all reports required by this permit. These records shall be true, accurate, and maintained in a permanent form suitable for inspection and made available to the Department of Health or its representative upon request.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-11, and §11-60.1-90)

2. Tank Nos. 1 and 2 Inspection

Tank inspection shall be performed as follows:

a. For a tank equipped with the seal system specified in Attachment IIB, Special Condition No. C.1.c.i, inspect in accordance with Attachment IIB, Special Condition Nos. D.3, D.4, and D.5.

b. For a tank equipped with the seal system specified in Attachment IIB, Special Condition No. C.1.c.ii, inspect in accordance with:

i. Attachment IIB, Special Condition Nos. D.3, D.4, and D.5; or alternatively.

ii. Attachment IIB, Special Condition Nos. D.3 and D.5, except that for the requirements of Special Condition No. D.5, inspect at least every **five (5) years** instead of ten (10) years.

c. For a tank equipped with the seal system specified in Attachment IIB, Special Condition No. C.1.c.iii, inspect in accordance with Attachment IIB, Special Condition Nos. D.3, D.4, and D.5.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-11, §11-60.1-90, and §11-60.1-161; 40 CFR §60.113b; SIP §11-60-15)[1,2]

3. Tank Nos. 1 and 2 Initial Inspection

After installing the control equipment required to meet Attachment IIB, Special Condition Nos. C.1.b through C.1.j, the permittee shall visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage tank with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the permittee shall repair the items before filling the storage vessel.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-11, §11-60.1-90, and §11-60.1-161; 40 CFR §60.113b; SIP §11-60-15)[1,2]

4. Tank Nos. 1 and 2 Annual Inspection

The permittee shall visually inspect the internal floating roof, the primary seal, and secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every **twelve (12) months** after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage tank, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the permittee shall repair the items or empty and remove the storage tank from service within **forty-five (45) days**. If a failure that is detected during inspections required by this paragraph cannot be repaired within **forty-five (45) days** and if the tank cannot be emptied within **forty-five (45) days**, a **thirty (30)-day** extension may be requested from the Department of Health in the inspection report required by Attachment IIB, Special Condition No. E.8. Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the permittee will take that will assure that the control equipment will be repaired or the storage tank will be emptied as soon as possible.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-11, §11-60.1-90, and §11-60.1-161; 40 CFR §60.113b; SIP §11-60-15)[1,2]

5. Tank Nos. 1 and 2 Inspection (Emptied and Degassed)

   *The permittee shall visually inspect the internal floating roof, the primary seal, the* secondary seal (if one is in service) gaskets, slotted membranes, and sleeve seals (if any) each time the storage tank is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the permittee shall repair the items, as necessary, so that none of the conditions specified in this paragraph exist before refilling the storage tank with VOL. In no event shall inspections conducted in accordance with this paragraph occur at intervals greater than **ten (10) years** and no greater than **five (5) years** for inspections conducted in accordance with Attachment IIB, Special Condition No. D.2.b.ii.

   (Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-11, §11-60.1-90, and §11-60.1-161; 40 CFR §60.113b; SIP §11-60-15)[1,2]

6. Tank Nos. 1 and 2 Records

   a. The permittee shall keep records of each inspection performed as required by *Attachment IIB, Special Condition Nos. D.3, D.4, and D.5. Records shall include the* tank identification, the date the tank was inspected, and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings, etc.).

   b. For each storage tank, records shall be maintained on the type of VOL stored, the period of storage, and the maximum true vapor pressure (psia) of VOL during the respective storage period. Determination of the true vapor pressure shall be done in accordance with 40 CFR, Part 60, §60.116b(e).

   c. A tank gauging system shall be operated and maintained for each tank to determine the yearly throughput of fuel for purposes of annual emissions reporting.

   d. Records showing the dimensions of each storage tank and an analysis showing the capacity of each storage tank shall be maintained for the life of each tank.

   (Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-11, §11-60.1-90, and §11-60.1-161; 40 CFR §60.115b and §60.116b; SIP §11-60-15)[1,2]

## Section E. Notification and Reporting Requirements

1. Standard Condition Reporting

   Notification and reporting pertaining to the following events shall be done in accordance with Attachment I, Standard Condition Nos. 14, 16, 17, and 24, respectively:

a. Anticipated date of initial startup, actual date of construction commencement, and actual date of startup of Tank Nos. 1 and 2;
b. Intent to shut down air pollution control equipment for necessary scheduled maintenance;
c. Emissions of air pollutants in violation of HAR, Chapter 11-60.1 or this permit (excluding technology-based emission exceedences due to emergencies); and
d. Permanent discontinuance of construction, modification, relocation, or operation of the facility, or any storage tank, covered by this permit.

(Auth.: HAR §11-60.1-8, §11-60.1-15, §11-60.1-16, and §11-60.1-90; SIP §11-60-10 and §11-60-16)[2]

2. Deviations

The permittee shall report **within five (5) working days** any deviations from permit requirements, including those attributed to upset conditions, the probable cause of such deviations, and any corrective actions or preventive measures taken. Corrective actions may include a requirement for testing, or more frequent monitoring, or could trigger implementation of a corrective action plan.

(Auth.: HAR §11-60.1-3, §11-60.1-15, §11-60.1-16, and §11-60.1-90)

3. Monitoring Report

*The permittee shall submit* ***semi-annually*** *the following written report to the Department of* Health. The report shall be submitted **within sixty (60) days after** the end of each semi-annual calendar period (January 1 - June 30 and July 1 - December 31), and shall include the following:

a. For each storage tank, any true vapor pressure that exceeded 11 psia for the fuel stored during the reporting period; and
b. Summary of any defects found with the control equipment and storage tank(s) during the reporting period for which an inspection was performed.

The enclosed **Monitoring Report Form: Storage Tanks**, shall be used for reporting.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-11, and §11-60.1-90)

4. Annual Emissions

As required by Attachment IV and in conjunction with the requirements of Attachment III, Annual Fee Requirements, the permittee shall submit **annually** the total tons per year emitted of each regulated air pollutant, including hazardous air pollutants. The reporting of annual emissions is due **within sixty (60) days following** the end of each calendar year.

Completion and submittal of the **Annual Emissions Report Form: Storage Tanks**, shall be used for reporting.

Upon the written request of the permittee, the deadline for reporting of annual emissions may be extended, if the Department of Health determines that reasonable justification exists for the extension.

(Auth.: HAR §11-60.1-3, §11-60.1-5, and §11-60.1-90)

5. Compliance Certification

During the permit term, the permittee shall submit at least **annually** to the Department of Health and U.S. EPA, Region 9, the attached **Compliance Certification Form** pursuant to HAR, Subsection 11-60.1-86. The permittee shall indicate whether or not compliance is being met with each term or condition of this permit. The compliance certification shall include, at a minimum, the following information:

a. The identification of each term or condition of the permit that is the basis of the certification;
b. The compliance status;
c. Whether compliance was continuous or intermittent;
d. The methods used for determining the compliance status of the source currently and over the reporting period;
e. Any additional information indicating the source's compliance status with any applicable enhanced monitoring and compliance certification, including the requirements of Section 114 (a) (3) of the Clean Air Act or any applicable monitoring and analysis provisions of Section 504 (b) of the Clean Air Act;
f. Information as required by 40 CFR Part 70, §70.6(c)(5)(iii); and
g. Any additional information as required by the Department of Health, including information to determine compliance.

The compliance certification shall be submitted within **ninety (90) days after** the end of each calendar year, and shall be signed and dated by a responsible official.

Upon the written request of the permittee, the deadline for submitting the compliance certification may be extended, if the Department of Health determines that reasonable justification exists for the extension.

(Auth.: HAR §11-60.1-4, §11-60.1-86, and §11-60.1-90)

6. Tank Nos. 1 and 2 Filling and Refilling

The permittee shall notify the Department of Health in writing at least **thirty (30) days** prior to the filling or refilling of each storage tank for which an inspection is required by

Attachment IIB, Special Condition Nos. D.3 and D.5. If the inspection required by Attachment IIB, Special Condition No. D.5 is unplanned and the required **thirty (30) days** advance notice cannot be given, the permittee shall notify the Department of Health at least **seven (7) days prior** to refilling the tank. Notification shall be made by telephone followed immediately by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification, including the written documentation, may be made in writing and sent by express mail, so that the Department of Health receives the notice at least **seven (7) days prior** to the refilling.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-11, §11-60.1-90, and §11-60.1-161; 40 CFR §60.113b; SIP §11-60-15)[1,2]

7. Tank Nos. 1 and 2 Initial Inspection Report

   The permittee shall furnish a report to the Department of Health after installing the control equipment in accordance with Attachment IIB, Special Condition Nos. C.1.b through C.1.j and performing visual inspection pursuant to Attachment IIB, Special Condition Nos. C.1.b through C.1.j and D.3. The report shall describe the control equipment and certify that the control equipment meets the specifications of Attachment IIB, Special Condition No. D.3. This report shall be an attachment to the notification required by 40 CFR, Part 60, §60.7(a)(3).

   (Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-11, §11-60.1-90, and §11-60.1-161; 40 CFR §60.113b and §60.115b; SIP §11-60-15)[1,2]

8. Tank Nos. 1 and 2 Annual Inspection Report

   A report shall be submitted within **thirty (30) days** of the annual visual inspection required by Attachment IIB, Special Condition No. D.4, if any conditions described in Special Condition No. D.4 are detected. Each report shall identify the storage tank, the nature of the defects, and the date the storage tank was emptied or the nature of and date the repair was made.

   (Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-11, §11-60.1-90, and §11-60.1-161; 40 CFR §60.113b and §60.115b; SIP §11-60-15)[1,2]

9. Tank Nos. 1 and 2 Inspection Report (Other)

   A report shall be submitted for inspections required by Attachment IIB, Special Condition No. D.2.b. This report shall be submitted within **thirty (30) days** if an inspection performed pursuant to Attachment IIB Special Condition Nos. D.4 or D.5 finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in Attachment IIB, Special Condition No. D.4. The report shall identify the storage

tank and the reason it did not meet the specifications of Attachment IIB, Special Condition Nos. C.1.b through C.1.j or Attachment IIB, Special Condition No. D.2.b and list each repair made.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, and §11-60-161; 40 CFR §60.113b and §60.115b)[1]

**Section F. Agency Notification**

1. Any document (including reports) required to be submitted by this covered source permit shall be in accordance with Attachment I, Standard Condition No. 30.

   (Auth.: HAR §11-60.1-4 and §11-60.1-90)

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[1] The citations to the CFR identified under a particular condition, indicate that the permit condition complies with the specified provision(s) of the CFR. Due to the integration of the preconstruction and operating permit requirements, permit conditions may incorporate more stringent requirements than those set forth in the CFR.

[2] The citations to the State Implementation Plan (SIP) identified under a particular condition, indicate that the permit condition complies with the specified provision(s) of the SIP.

**ATTACHMENT II - INSIG: SPECIAL CONDITIONS - INSIGNIFICANT ACTIVITIES**
**COVERED SOURCE PERMIT NO. 0548-01-C**

**Issuance Date: February 24, 2010** **Expiration Date: May 21, 2012**

In addition to the standard conditions of the covered source permit, the following special conditions shall apply to the permitted facility:

## Section A. Equipment Description

1. Attachment II-INSIG of this permit encompasses the following insignificant activities:

   a. Three (3) 345,000 barrel vertical fixed roof storage tanks storing fuel oil No. 6 for Kahe Generating Station;
   b. One 5,000 gallon fuel oil No. 2 storage tank;
   c. Other storage tanks less than 40,000 gallons capacity;
   d. A vapor mitigation system;
   e. Fuel burning equipment less than 1 MMBtu/hr, other than smoke house generators and gasoline fired industrial equipment;
   f. Standby emergency generators;
   g. Paint spray booths that emit less than two tons per year of any regulated air pollutant; and
   h. Other activities with emissions less than those specified by HAR, §11-60.1-82(f)(7).

   (Auth.: HAR §11-60.1-3)

## Section B. Operational Limitations

1. The permittee shall take measures to operate insignificant activities in accordance with the provisions of HAR, Subchapter 2.

   (Auth.: HAR §11-60.1-3, §11-60.1-82, and §11-60.1-90)

2. The Department of Health may at any time require the permittee to further abate emissions if an inspection indicates poor or insufficient controls.

   (Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-82, and §11-60.1-90)

## Section C. Monitoring and Record keeping Requirements

1. The Department of Health reserves the right to require monitoring, record keeping, or testing of any insignificant activity to determine compliance with the applicable requirements.

   (Auth.: HAR §11-60.1-3 and §11-60.1-90)

2. All records shall be maintained for at least five (5) years from the date of any required monitoring, record keeping, testing, or reporting. These records shall be true, accurate,

and maintained in a permanent form suitable for inspection and made available to the Department of Health or its authorized representative upon request.
(Auth.: HAR §11-60.1-3, §11-60.1-11, and §11-60.1-90)

## Section D. Notification and Reporting

1. During the permit term, the permittee shall submit at least **annually** to the Department of Health and U.S. EPA, Region 9, the attached **Compliance Certification Form** pursuant to HAR, Subsection 11-60.1-86. The permittee shall indicate whether or not compliance is being met with each term or condition of this permit. The compliance certification shall include, at a minimum, the following information:

   a. The identification of each term or condition of the permit that is the basis of the certification;
   b. The compliance status;
   c. Whether compliance was continuous or intermittent;
   d. The methods used for determining the compliance status of the source currently and over the reporting period; and
   e. Any additional information as required by the Department of Health including information to determine compliance.

   In lieu of addressing each emission unit as specified in **Compliance Certification Form**, the permittee may address insignificant activities as a single unit provided compliance is met with all applicable requirements. If compliance is not totally attained, the permittee shall identify the specific insignificant activity and provide the details associated with the noncompliance.

   The compliance certification shall be submitted **within ninety (90) days after** the end of each calendar year, and shall be signed and dated by a responsible official or authorized representative.

   Upon written request of the permittee, the deadline for submitting the compliance certification may be extended, if the Department of Health determines that reasonable justification exists for the extension.

   (Auth.: HAR §11-60.1-4, §11-60.1-86, and §11-60.1-90)

## Section E. Agency Notification

1. Any document (including reports) required to be submitted by this covered source permit shall be done in accordance with Attachment I, Standard Condition No. 30.

   (Auth.: HAR §11-60.1-4 and §11-60.1-90)

**ATTACHMENT III: ANNUAL FEE REQUIREMENTS**
**COVERED SOURCE PERMIT NO. 0548-01-C**

**Issuance Date:** February 24, 2010 **Expiration Date:** May 21, 2012

The following requirements for the submittal of annual fees are established pursuant to Hawaii Administrative Rules (HAR), Title 11, Chapter 60.1, Air Pollution Control. Should HAR, Chapter 60.1 be revised such that the following requirements are in conflict with the provisions of HAR, Chapter 60.1, the permittee shall comply with the provisions of HAR, Chapter 60.1:

1. Annual fees shall be paid in full:

   a. Within **sixty (60) days** after the end of each calendar year; and
   b. Within **thirty (30) days** after the permanent discontinuance of the covered source.

2. The annual fees shall be determined and submitted in accordance with Hawaii Administrative Rules, Chapter 11-60.1, Subchapter 6.

3. The annual emissions data for which the annual fees are based shall accompany the submittal of any annual fees and submitted on forms furnished by the Department of Health.

4. The annual fees and the emission data shall be mailed to:

**Clean Air Branch**
**Environmental Management Division**
**Hawaii Department of Health**
**919 Ala Moana Boulevard, Room 203**
**Honolulu, HI 96814**

**ATTACHMENT IV: ANNUAL EMISSIONS REPORTING REQUIREMENTS**
**COVERED SOURCE PERMIT NO. 0548-01-C**

**Issuance Date: February 24, 2010** **Expiration Date: May 21, 2012**

In accordance with the Hawaii Administrative Rules, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the nature and amounts of emissions.

1. Complete the attached forms:

   Annual Emissions Report Form: CIP1 and CIP2
   Annual Emissions Report Form: BSG1 and BSG2
   Annual Emissions Report Form: Storage Tanks

2. The reporting period shall be from January 1 to December 31 of each year. All reports shall be submitted to the Department of Health within **sixty (60) days** after the end of each calendar year and shall be mailed to the following address:

   **Clean Air Branch**
   **Environmental Management Division**
   **Hawaii Department of Health**
   **919 Ala Moana Boulevard, Room 203**
   **Honolulu, HI 96814**

3. The permittee shall retain the information submitted, including all emission calculations. These records shall be in a permanent form suitable for inspection, retained for a minimum of five (5) years, and made available to the Department of Health upon request.

4. Any information submitted to the Department of Health without a request for confidentiality shall be considered public record.

5. In accordance with HAR, Section 11-60.1-14, the permittee may request confidential treatment of specific information including information concerning secret processes or methods of manufacturing, by submitting a written request to the Director and clearly identifying the specific information that is to be accorded confidential treatment.

**COMPLIANCE CERTIFICATION FORM**
**COVERED SOURCE PERMIT NO. 0548-01-C**
**PAGE 1 OF ___**

**Issuance Date: February 24, 2010** **Expiration Date: May 21, 2012**

In accordance with the Hawaii Administrative Rules, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the following certification at least annually, or more frequently as requested by the Department.

(Make Copies of the Compliance Certification Form for Future Use)

For Period: _____ Date: _____

Company/Facility Name: Hawaiian Electric Company, Inc. (HECO)

Responsible Official (Print): _____

Title: _____

Responsible Official (Signature): _____

I certify that I have knowledge of the facts herein set forth, that the same are true, accurate and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by Department of Health as public record. I further state that I will assume responsibility for the construction, modification, or operation of the source in accordance with the Hawaii Administrative Rules, Title 11, Chapter 60.1, Air Pollution Control, and any permit issued thereof.

**COMPLIANCE CERTIFICATION FORM**
**COVERED SOURCE PERMIT NO. 0548-01-C**
**(CONTINUED, PAGE 2 OF ___)**

**Issuance Date: February 24, 2010** **Expiration Date: May 21, 2012**

The purpose of this form is to evaluate whether or not the facility was in compliance with the permit terms and conditions during the covered period. If there were any deviations to the permit terms and conditions during the covered period, the deviation(s) shall be certified as *intermittent compliance* for the particular permit term(s) or condition(s). Deviations include failure to monitor, record, report, or collect the minimum data required by the permit to show compliance. In the absence of any deviation, the particular permit term(s) or condition(s) may be certified as *continuous compliance*.

**Instructions:**
Please certify Sections A, B, and C below for continuous or intermittent compliance. Sections A and B are to be certified as a group of permit conditions. Section C shall be certified individually for each operational and emissions limit condition as listed in the Special Conditions section of the permit (list all applicable equipment for each condition). Any deviations shall also be listed individually and described in Section D. The facility may substitute its own generated form in verbatim for Sections C and D.

**A. Attachment I, Standard Conditions**

| Permit term/condition | Equipment(s) | Compliance |
|---|---|---|
| All standard conditions | All Equipment(s) listed in the permit | ☐ Continuous<br>☐ Intermittent |

**B. Special Conditions - Monitoring, Recordkeeping, Reporting, Testing, and INSIG**

| Permit term/condition | Equipment(s) | Compliance |
|---|---|---|
| All monitoring conditions | All Equipment(s) listed in the permit | ☐ Continuous<br>☐ Intermittent |
| Permit term/condition<br>All recordkeeping conditions | Equipment(s)<br>All Equipment(s) listed in the permit | Compliance<br>☐ Continuous<br>☐ Intermittent |
| Permit term/condition<br>All reporting conditions | Equipment(s)<br>All Equipment(s) listed in the permit | Compliance<br>☐ Continuous<br>☐ Intermittent |
| Permit term/condition<br>All testing conditions | Equipment(s)<br>All Equipment(s) listed in the permit | Compliance<br>☐ Continuous<br>☐ Intermittent |
| Permit term/condition<br>All INSIG conditions | Equipment(s)<br>All Equipment(s) listed in the permit | Compliance<br>☐ Continuous<br>☐ Intermittent |

**COMPLIANCE CERTIFICATION FORM**
**COVERED SOURCE PERMIT NO. 0548-01-C**
**(CONTINUED, PAGE ____ OF ___)**

**Issuance Date:** February 24, 2010 **Expiration Date:** May 21, 2012

**C. Special Conditions - Operational and Emissions Limitations**

Each permit term/condition shall be identified in chronological order using attachment and section numbers (e.g., Attachment II, B.1, Attachment IIA, Special Condition No. B.1.f, etc.). Each equipment shall be identified using the description stated in Section A of the Special Conditions (e.g., unit no., model no., serial no., etc.). Check all methods (as required by permit) used to determine the compliance status of the respective permit term/condition.

| Permit term/condition | Equipment(s) | Method | Compliance |
|---|---|---|---|
| | | ☐ monitoring<br>☐ recordkeeping<br>☐ reporting<br>☐ testing<br>☐ none of the above | ☐ Continuous<br>☐ Intermittent |
| | | ☐ monitoring<br>☐ recordkeeping<br>☐ reporting<br>☐ testing<br>☐ none of the above | ☐ Continuous<br>☐ Intermittent |
| | | ☐ monitoring<br>☐ recordkeeping<br>☐ reporting<br>☐ testing<br>☐ none of the above | ☐ *Continuous*<br>☐ Intermittent |
| | | ☐ monitoring<br>☐ recordkeeping<br>☐ reporting<br>☐ testing<br>☐ none of the above | ☐ Continuous<br>☐ Intermittent |
| | | ☐ monitoring<br>☐ recordkeeping<br>☐ reporting<br>☐ testing<br>☐ none of the above | ☐ Continuous<br>☐ Intermittent |
| | | ☐ monitoring<br>☐ recordkeeping<br>☐ reporting<br>☐ testing<br>☐ none of the above | ☐ Continuous<br>☐ Intermittent |

**(Make Additional Copies if Needed)**

**COMPLIANCE CERTIFICATION FORM**
**COVERED SOURCE PERMIT NO. 0548-01-C**
**(CONTINUED, PAGE ___ OF ___)**

**Issuance Date:** February 24, 2010 **Expiration Date:** May 21, 2012

## D. Deviations

| Permit Term/ Condition | Equipment(s) / Brief Summary of Deviation | Deviation Period time (am/pm) & date (mo/day/yr) | Date of Written Deviation Report to DOH (mo/day/yr) |
|---|---|---|---|
| | | Beginning:<br>Ending: | |
| | | Beginning:<br>Ending: | |
| | | Beginning:<br>Ending: | |
| | | Beginning:<br>Ending: | |
| | | Beginning:<br>Ending: | |
| | | Beginning:<br>Ending: | |
| | | Beginning:<br>Ending: | |

**(Make Additional Copies if Needed)**

**EXCESS EMISSION AND MONITORING SYSTEM**
**PERFORMANCE SUMMARY REPORT**
**COVERED SOURCE PERMIT NO. 0548-01-C**
**(PAGE 1 OF 3)**

**Issuance Date:** February 24, 2010 **Expiration Date:** May 21, 2012

In accordance with the HAR, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the following information semi-annually:

(Make Copies for Future Use)

COMPLETE SEPARATE FORMS FOR UNITS CIP1 AND CIP2

CONDITION NO.: _____

Facility Name: Campbell Industrial Park Generating Station

Company Name: Hawaiian Electric Company, Inc. (HECO)

Equipment Location: _____

Equipment Description (Unit No.): _____

**Pollutant Monitored:** _____

From: Date _____ Time _____

To: Date _____ Time _____

Emission Limit: _____

Date of Last CEMS Certification/Audit: _____

**Total Source Operating Time:** _____

EMISSION DATA SUMMARY

1. Duration (hours/periods) of Excess Emissions in Reporting Period due to:
   a. Startup/Shutdown..... _____
   b. Control Equipment Failure..... _____
   c. Process Problems..... _____
   d. Other Known Causes..... _____
   e. Unknown Causes..... _____
   f. Fuel Problems..... _____
   Number of incidents of excess emissions..... _____
2. Total Duration of Excess Emissions..... _____
3. Total Duration of Excess Emissions..... _____
   (% of Total Source Operating Time)..... _____

CEMS PERFORMANCE SUMMARY

1. *CEMS downtime (hours/periods) in reporting period due to:* _____
   a. Monitor equipment malfunctions..... _____
   b. Non-Monitor equipment malfunctions..... _____
   c. Quality assurance calibration..... _____
   d. Other known causes..... _____
   e. Unknown causes..... _____
   Number of incidents of monitor downtime..... _____

**EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE SUMMARY REPORT**
**COVERED SOURCE PERMIT NO. 0548-01-C**
**(CONTINUED, PAGE 2 OF 3)**

**Issuance Date: February 24, 2010** **Expiration Date: May 21, 2012**

2. Total CEMS Downtime..... _____
3. Total CEMS Downtime
   (% of Total Source Operating Time)..... _____

COMS PERFORMANCE SUMMARY

1. COMS downtime (hours/periods) in reporting period due to:
   a. Monitor Equipment Malfunctions..... _____
   b. Non-Monitor Equipment Malfunctions..... _____
   c. Quality Assurance Calibration..... _____
   d. Other Known Causes..... _____
   e. Unknown Causes..... _____
   Number of incidents of monitor downtime..... _____
2. Total COMS Downtime..... _____
3. Total COMS Downtime
   (% of Total Source Operating Time)..... _____

WATER-TO FUEL RATIO PERFORMANCE SUMMARY

1. CMS downtime (hours/periods) in reporting period due to:
   a. Monitor equipment malfunctions..... _____
   b. Non-Monitor equipment malfunctions..... _____
   c. Quality assurance calibration..... _____
   d. Other known causes..... _____
   e. Unknown causes..... _____
   Number of incidents of monitor downtime..... _____
2. Total CMS Downtime..... _____
3. Total CMS Downtime
   (% of Total Source Operating Time)..... _____

**EXCESS EMISSION AND MONITORING SYSTEM**
**PERFORMANCE SUMMARY REPORT**
**COVERED SOURCE PERMIT NO. 0548-01-C**
**(CONTINUED, PAGE 3 OF 3)**

**Issuance Date: February 24, 2010** **Expiration Date: May 21, 2012**

4. Identify all dates, times, and duration where one-hour average water-to-fuel ratio was "below" the required ratio for the corresponding turbine load.

| Date | Time | Duration (Minutes) | Turbine Load (MW) | Percent Turbine Load | Water-to Fuel Ratio | $NO_x$ Limit Exceeded? |
|---|---|---|---|---|---|---|
| | | | | | | Yes/No |
| | | | | | | Yes/No |
| | | | | | | Yes/No |
| | | | | | | Yes/No |
| | | | | | | Yes/No |
| | | | | | | Yes/No |

Provide on another sheet the reason why water-to-fuel ratio(s) were below the required ratio. If any $NO_x$ limits were exceeded, identify the water-to-fuel ratio(s) (lb fuel/lb water) and $NO_x$ reading in lbs/hr and ppmvd.

5. Number of incidents of water-to-fuel ratio below required ratio..... _____
6. Total Duration of water-to-fuel ratio below required ratio..... _____
7. Percentage of Total Duration below required ratio
   (% of Total Source Operating Time)..... _____

FUEL SULFUR CONTENT SUMMARY

1. Number of incidents of excess Emissions..... _____
2. Maximum fuel sulfur content % by weight..... _____

ALTERNATE OPERATING SCENARIOS

1. Number of incidents of excess emissions: ..... _____
2. If incident(s) are reported, identify on a separate sheet the implemented alternate operating scenarios that has contributed to excess emissions. Describe the alternate operating scenario, and include the date, time, type and duration of excess emissions, and reason for exceedences.

**CERTIFICATION by Responsible Official**

**I certify that I have knowledge of the facts herein set forth, that the same are true, accurate and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by the Department of Health as public record.**

NAME (Print/Type): _____
Title: _____
(Signature): _____

**ANNUAL EMISSIONS REPORT FORM**
**CIP1 AND CIP2**
**COVERED SOURCE PERMIT NO. 0548-01-C**
**(PAGE 1 OF 5)**

**Issuance Date: February 24, 2010** **Expiration Date: May 21, 2012**
In accordance with the HAR, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the nature and amounts of emissions.

(Make Copies for Additional Use)

For Reporting Period: _____ Date: _____

Company Name: Hawaiian Electric Company, Inc. (HECO)

Facility Name: Campbell Industrial Park Generating Station

**I certify that I have knowledge of the facts herein set forth, that the same are true, accurate and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by the Department of Health as public record.**

Responsible Official (Print): _____

Title: _____

Responsible Official (Signature): _____

1. Report the ton per year $SO_2$ emissions for CIP1 as follows:

**CIP1 $SO_2$ Emissions**

| Month | Fuel Consumption (lbs) | | | Fuel Sulfur Content (% by weight) | | | $SO_2$ Emissions CIP1 (tons) | | | Total Combined $SO_2$ Emissions (tons) |
|---|---|---|---|---|---|---|---|---|---|---|
| | Fuel Oil No. 2 | Naphtha | Other: _____ | Fuel Oil No. 2 | Naphtha | Other: _____ | Fuel Oil No. 2 | Naphtha | Other: _____ | |
| January | | | | | | | | | | |
| February | | | | | | | | | | |
| March | | | | | | | | | | |
| April | | | | | | | | | | |
| May | | | | | | | | | | |
| June | | | | | | | | | | |
| July | | | | | | | | | | |
| August | | | | | | | | | | |
| September | | | | | | | | | | |
| October | | | | | | | | | | |
| November | | | | | | | | | | |
| December | | | | | | | | | | |
| | | | | | | | | | Total----> | |

**ANNUAL EMISSIONS REPORT FORM**
**CIP1 AND CIP2**
**COVERED SOURCE PERMIT NO. 0548-01-C**
**(CONTINUED, PAGE 2 OF 5)**

**Issuance Date:** February 24, 2010 **Expiration Date:** May 21, 2012

2. Report the ton per year $SO_2$ emissions for CIP2 as follows:

| CIP2 $SO_2$ Emissions | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Month | Fuel Consumption (lbs) | | | Fuel Sulfur Content (% by weight) | | | $SO_2$ Emissions CIP1 (tons) | | | Total Combined $SO_2$ Emissions (tons) |
| | Fuel Oil No. 2 | Naphtha | Other: _____ | Fuel Oil No. 2 | Naphtha | Other: _____ | Fuel Oil No. 2 | Naphtha | Other: _____ | |
| January | | | | | | | | | | |
| February | | | | | | | | | | |
| March | | | | | | | | | | |
| April | | | | | | | | | | |
| May | | | | | | | | | | |
| June | | | | | | | | | | |
| July | | | | | | | | | | |
| August | | | | | | | | | | |
| September | | | | | | | | | | |
| October | | | | | | | | | | |
| November | | | | | | | | | | |
| December | | | | | | | | | | |
| | | | | | | | | Total-----> | | |

**ANNUAL EMISSIONS REPORT FORM**
**CIP1 AND CIP2**
**COVERED SOURCE PERMIT NO. 0548-01-C**
**(CONTINUED, PAGE 3 OF 5)**

**Issuance Date:** February 24, 2010 **Expiration Date:** May 21, 2012

3. Report the ton per year criteria pollutant emissions for CIP1 as follows:

| CIP1 (Other Criteria Pollutant Emissions) | | |
|---|---|---|
| Pollutant | Emission (ton/yr) | Basis for Emissions Calculation |
| PM | | _____ ____ _____<br>emission rate units basis[a] |
| $PM_{10}$ | | _____ ____ _____<br>emission rate units basis[a] |
| $PM_{2.5}$ | | _____ ____ _____<br>emission rate units basis[a] |
| CO | | Higher of CEMS or Performance Test (circle one)<br>_____ ____ _____<br>emission rate units basis[a] |
| $NO_X$ | | Higher of CEMS or Performance Test (circle one<br>_____ ____ _____<br>emission rate units basis[a] |
| VOC | | _____ ____ _____<br>emission rate units basis[a] |
| Pb | | _____ ____ _____<br>emission rate units basis[a] |

a: Identify basis of emission rate: CEMS, AP-42 emission factor, performance test, permit limit, etc.

**ANNUAL EMISSIONS REPORT FORM**
**CIP1 AND CIP2**
**COVERED SOURCE PERMIT NO. 0548-01-C**
**(CONTINUED, PAGE 4 OF 5)**

**Issuance Date:** February 24, 2010 **Expiration Date:** May 21, 2012

4. Report the ton per year criteria pollutant emissions for CIP2 as follows:

| CIP2 (Other Criteria Pollutant Emissions) | | |
|---|---|---|
| Pollutant | Emission (ton/yr) | Basis for Emissions Calculation |
| PM | | _____ ____ _____<br>emission rate units basis[a] |
| $PM_{10}$ | | _____ ____ _____<br>emission rate units basis[a] |
| $PM_{2.5}$ | | _____ ____ _____<br>emission rate units basis[a] |
| CO | | Higher of CEMS or Performance Test (circle one)<br>_____ ____ _____<br>emission rate units basis[a] |
| $NO_x$ | | Higher of CEMS or Performance Test (circle one)<br>_____ ____ _____<br>emission rate units basis[a] |
| VOC | | _____ ____ _____<br>emission rate units basis[a] |
| Pb | | _____ ____ _____<br>emission rate units basis[a] |

a: Identify basis of emission rate: CEMS, AP-42 emission factor, performance test, permit limit, etc.

**ANNUAL EMISSIONS REPORT FORM**
**CIP1 AND CIP2**
**COVERED SOURCE PERMIT NO. 0548-01-C**
**(CONTINUED, PAGE 5 OF 5)**

**Issuance Date:** February 24, 2010 **Expiration Date:** May 21, 2012

5. Report the MMBtu/yr firing rate for CIP1 and CIP2 as follows for determining HAP emissions:

| Unit | Capacity (MMBtu/hr) | Firing Rate (MMBtu/yr) |
|---|---|---|
| CIP1 | 1,482.4 | |
| CIP2 | 1,482.4 | |
| Total Combined Firing Rate------> | | |

**ANNUAL EMISSIONS REPORT FORM**
**BSG1 AND BSG2**
**COVERED SOURCE PERMIT NO. 0548-01-C**

**Issuance Date: February 24, 2010** **Expiration Date: May 21, 2012**

In accordance with the HAR, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the nature and amounts of emissions:

(Make Copies for Additional Use)

For Reporting Period: _____ Date: _____

Company Name: Hawaiian Electric Company, Inc. (HECO)

Facility Name: Campbell Industrial Park Generating Station

**I certify that I have knowledge of the facts herein set forth, that the same are true, accurate and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by the Department of Health as public record.**

Responsible Official (Print): _____

Title: _____

Responsible Official (Signature): _____

| Unit | Capacity (MMBtu/hr) | Maximum % Sulfur Content by Weight | Fuel Oil No. 2 Consumption (gallons/yr) |
|---|---|---|---|
| BSG1 | 22.9 | | |
| BSG2 | 22.9 | | |
| | | Total Combined Consumption----> | |

**ANNUAL EMISSIONS REPORT FORM**
**STORAGE TANKS**
**COVERED SOURCE PERMIT NO. 0548-01-C**

**Issuance Date: February 24, 2010** **Expiration Date: May 21, 2012**

*In accordance with the HAR, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the nature and amounts of emissions:*

(Make Copies for Additional Use)

For Reporting Period: _____ Date: _____

Company Name: Hawaiian Electric Company, Inc. (HECO)

Facility Name: Campbell Industrial Park Generating Station

**I certify that I have knowledge of the facts herein set forth, that the same are true, accurate and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by the Department of Health as public record.**

Responsible Official (Print): _____

Title: _____

Responsible Official (Signature): _____

| TANK & PRODUCT DESCRIPTION | TANK NUMBER | | | | | |
|---|---|---|---|---|---|---|
| | 1 | | | 2 | | |
| TANK CAPACITY (gallons) | | | | | | |
| TANK DIAMETER (ft) | | | | | | |
| TANK EXTERIOR COLOR | | | | | | |
| DECK TYPE (bolted/welded) | | | | | | |
| PRODUCT NAME | 1 | | | 1 | | |
| | 2 | | | 2 | | |
| | 3 | | | 3 | | |
| TRUE VAPOR PRESSURE (psia) | 1 | 2 | 3 | 1 | 2 | 3 |
| LIQUID MOLECULAR WEIGHT | | | | | | |
| VAPOR MOLECULAR WEIGHT | | | | | | |
| AVG. STORAGE TEMPERATURE ($^{o}$F) | | | | | | |
| ANNUAL THROUGHPUT (gallons) | 1 | | | 1 | | |
| | 2 | | | 2 | | |
| | 3 | | | 3 | | |

**MONITORING REPORT FORM**
**CIP1 AND CIP2 FIRING RATE**
**COVERED SOURCE PERMIT NO. 0548-01-C**
**(PAGE 1 OF 3)**

**Issuance Date: February 24, 2010** **Expiration Date: May 21, 2012**

In accordance with the HAR, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the following information semi-annually:

(Make Copies for Additional Use)

For Reporting Period: _____ Date: _____

Company Name: Hawaiian Electric Company, Inc. (HECO)

Facility Name: Campbell Industrial Park Generating Station

**I certify that I have knowledge of the facts herein set forth, that the same are true, accurate and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by the Department of Health as public record.**

Responsible Official (Print): _____

Title: _____

Responsible Official (Signature): _____

1. Report the monthly HHV (Btu/lb) for each fuel fired:

| Month | Fuel HHV for Month (Btu/lb) | | | | | |
|---|---|---|---|---|---|---|
| | Naphtha | | Fuel Oil No. 2 | | Other _____ | |
| | CIP1 | CIP2 | CIP1 | CIP2 | CIP1 | CIP2 |
| January | | | | | | |
| February | | | | | | |
| March | | | | | | |
| April | | | | | | |
| May | | | | | | |
| June | | | | | | |
| July | | | | | | |
| August | | | | | | |
| September | | | | | | |
| October | | | | | | |
| November | | | | | | |
| December | | | | | | |

**MONITORING REPORT FORM**
**CIP1 AND CIP2 FIRING RATE**
**COVERED SOURCE PERMIT NO. 0548-01-C**
**(CONTINUED, PAGE 2 OF 3)**

**Issuance Date: February 24, 2010** **Expiration Date: May 21, 2012**

In accordance with the HAR, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the following information semi-annually:

2. Report the monthly fuel consumption (pounds) as follows:

| Month | Fuel Consumption (lbs) | | | | | |
|---|---|---|---|---|---|---|
| | Naphtha | | Fuel Oil No.2 | | Other _____ | |
| | CIP1 | CIP2 | CIP1 | CIP2 | CIP1 | CIP2 |
| January | | | | | | |
| February | | | | | | |
| March | | | | | | |
| April | | | | | | |
| May | | | | | | |
| June | | | | | | |
| July | | | | | | |
| August | | | | | | |
| September | | | | | | |
| October | | | | | | |
| November | | | | | | |
| December | | | | | | |

**MONITORING REPORT FORM**
**CIP1 AND CIP2 FIRING RATE**
**COVERED SOURCE PERMIT NO. 0548-01-C**
**(CONTINUED, PAGE 3 OF 3)**

**Issuance Date: February 24, 2010** **Expiration Date: May 21, 2012**

3. Report the firing rate (MMBtu) as follows:

| Month | Firing Rate (MMBtu) | | | | | | Total Combined Fuel Firing Rate 12-Month Rolling Basis (MMBtu) |
|---|---|---|---|---|---|---|---|
| | Naphtha | | Fuel Oil No.2 | | Other_____ | | All Fuels (CIP1 and CIP2) |
| | CIP1 | CIP2 | CIP1 | CIP2 | CIP1 | CIP2 | |
| January | | | | | | | |
| February | | | | | | | |
| March | | | | | | | |
| April | | | | | | | |
| May | | | | | | | |
| June | | | | | | | |
| July | | | | | | | |
| August | | | | | | | |
| September | | | | | | | |
| October | | | | | | | |
| November | | | | | | | |
| December | | | | | | | |

**MONITORING REPORT FORM**
**CIP1 AND CIP2 OPERATION**
**COVERED SOURCE PERMIT NO. 0548-01-C**
**(PAGE 1 OF 6)**

**Issuance Date: February 24, 2010** **Expiration Date: May 21, 2012**

In accordance with the HAR, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the following information semi-annually:

(Make Copies for Additional Use)

COMPLETE SEPARATE FORMS FOR CIP1 AND CIP2

For Reporting Period: _____ Date: _____

Company Name: Hawaiian Electric Company, Inc. (HECO)

Facility Name: Campbell Industrial Park Generating Station

**I certify that I have knowledge of the facts herein set forth, that the same are true, accurate and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by the Department of Health as public record.**

Responsible Official (Print): _____

Title: _____

Responsible Official (Signature): _____

Identify the following:

1. Combustion turbine generator unit: _____
2. Month of operation: _____
3. All incidences when 60 minute startup or shutdown durations were exceeded:

| Exceedence | | Duration (minutes) | | Reason for Exceedence/Final Outcome/Corrective Actions |
|---|---|---|---|---|
| Date | Time | Startup | Shutdown | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

**MONITORING REPORT FORM**
**CIP1 AND CIP2 OPERATION**
**COVERED SOURCE PERMIT NO. 0548-01-C**
**(CONTINUED, PAGE 2 OF 6)**

**Issuance Date:** February 24, 2010 **Expiration Date:** May 21, 2012

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3. All incidences when 60-minute startup or shutdown durations were exceeded (continued):

| Exceedence | | Duration (minutes) | | Reason for Exceedence/Final Outcome/Corrective Actions |
|---|---|---|---|---|
| Date | Time | startup | shutdown | |
| | | | | |
| | | | | |
| | | | | |

4. All incidences when more than four startups occurred per day:

| Exceedence Date | Total Number of Startups | Reason for Exceedence/Final Outcome/Corrective Actions |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |

**MONITORING REPORT FORM**
**CIP1 AND CIP2 OPERATION**
**COVERED SOURCE PERMIT NO. 0548-01-C**
**(CONTINUED, PAGE 3 OF 6)**

**Issuance Date:** February 24, 2010 **Expiration Date:** May 21, 2012

(Make Copies for Additional Use)

5. Dates and times when the water injection system was not operated in accordance with that specified in Attachment IIA, Special Condition No. C.5:

| Exceedence | | Duration (minutes) | | Reason for Exceedence/Final Outcome/Corrective Actions |
|---|---|---|---|---|
| Date | Time | startup | shutdown | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

6. Dates, times, and durations when the combustion turbine generators were operated below minimum operating load other than during startup, shutdown, and those periods as approved pursuant to Attachment IIA, Special Condition No. C.9.a:

| Exceedence | | Below Minimum Operating Load | Reason for Exceedence/Final Outcome/Corrective Actions |
|---|---|---|---|
| Date | Time | Duration (minutes) | |
| | | | |
| | | | |

**MONITORING REPORT FORM**
**CIP1 AND CIP2 OPERATION**
**COVERED SOURCE PERMIT NO. 0548-01-C**
**(CONTINUED, PAGE 4 OF 6)**

**Issuance Date:** February 24, 2010 **Expiration Date:** May 21, 2012

(Make Copies for Additional Use)

6. Dates, times, and durations when the combustion turbine generators were operated below minimum operating load other than during startup, shutdown, and those periods as approved pursuant to Attachment IIA, Special Condition No. C.9.a (continued):

| Exceedence | | Below Minimum Operating Load | Reason for Exceedence/Final Outcome/Corrective Actions |
|---|---|---|---|
| Date | Time | Duration (minutes) | |
| | | | |
| | | | |
| | | | |

7. Dates, times, and durations when the combustion turbine generators were operated above peak load other than during those periods as approved pursuant to Attachment IIA, Special Condition No. C.9.b:

| Exceedence | | Above Peak Load | Reason for Exceedence/Final Outcome/Corrective Actions |
|---|---|---|---|
| Date | Time | Duration (minutes) | |
| | | | |
| | | | |
| | | | |

**MONITORING REPORT FORM**
**CIP1 AND CIP2 OPERATION**
**COVERED SOURCE PERMIT NO. 0548-01-C**
**(CONTINUED, PAGE 5 OF 6)**

**Issuance Date:** February 24, 2010 **Expiration Date:** May 21, 2012

(Make Copies for Additional Use)

7. Dates, times, and durations when the combustion turbine generators were operated above peak load other than during those periods as approved pursuant to Attachment IIA, Special Condition No. C.9.b (continued):

| Exceedence | | Above Peak Load | Reason for Exceedence/Final Outcome/Corrective Actions |
|---|---|---|---|
| Date | Time | Duration (minutes) | |
| | | | |
| | | | |

8. Identify the dates, times, and duration of any malfunction in the operation of the combustion turbine generators and the water injection systems:

| Malfunction | | Duration (minutes) | | Reason for Exceedence/Final Outcome/Corrective Actions |
|---|---|---|---|---|
| Date | Time | Combustion Turbine Generator | Water Injection System | |
| | | | | |
| | | | | |
| | | | | |

**MONITORING REPORT FORM**
**CIP1 AND CIP2 OPERATION**
**COVERED SOURCE PERMIT NO. 0548-01-C**
**(CONTINUED, PAGE 6 OF 6)**

**Issuance Date:** February 24, 2010 **Expiration Date:** May 21, 2012

9. Provide a summary of alternate operating scenarios implemented during the reporting period. For the summary, provide statement indicating whether or not applicable permit requirements have been met. Attach any supporting data as required by Special Condition No. C.9.a through C.9.f.

10. Provide for the reporting period the date, times, and duration the combustion turbine generators were operated at a load greater than 10 MW above minimum operating load when the steam units from other plants were reasonably able to serve system needs.

| Malfunction | | Duration (minutes) | Reason for Exceedence/Final Outcome/Corrective Actions |
|---|---|---|---|
| Date | Time | Combustion Turbine Generator | |
| | | | |
| | | | |
| | | | |

**MONITORING REPORT FORM**
**CIP1, CIP2, BSG1, AND BSG2 FUEL CERTIFICATION**
**COVERED SOURCE PERMIT NO. 0548-01-C**
**(PAGE 1 OF 2)**

**Issuance Date: February 24, 2010** **Expiration Date: May 21, 2012**

In accordance with the HAR, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the following information semi-annually:

(Make Copies for Additional Use)

For Reporting Period: _____ Date _____

Company Name: Hawaiian Electric Company, Inc. (HECO)

Facility Name: Campbell Industrial Park Generating Station

**I certify that I have knowledge of the facts herein set forth, that the same are true, accurate and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by the Department of Health as public record.**

Responsible Official (Print): _____

Title: _____

Responsible Official (Signature): _____

1. Report the fuel sulfur content for CIP1 and CIP2 as follows:

| Month | Fuel Sulfur Content (% by weight) | | | | | |
|---|---|---|---|---|---|---|
| | Naphtha | | Fuel Oil No.2 | | Other _____ | |
| | CIP1 | CIP2 | CIP1 | CIP2 | CIP1 | CIP2 |
| January | | | | | | |
| February | | | | | | |
| March | | | | | | |
| April | | | | | | |
| May | | | | | | |
| June | | | | | | |
| July | | | | | | |
| August | | | | | | |
| September | | | | | | |
| October | | | | | | |
| November | | | | | | |
| December | | | | | | |

**MONITORING REPORT FORM**
**CIP1, CIP2, BSG1, AND BSG2 FUEL CERTIFICATION**
**COVERED SOURCE PERMIT NO. 0548-01-C**
**(CONTINUED, PAGE 2 OF 2)**

**Issuance Date:** February 24, 2010 **Expiration Date:** May 21, 2012

2. For fuel sulfur content and HHV monitoring requirements, provide in the following table the fuel sampling option used for each fuel fired among those sampling options from Sections 2.2.3, 2.2.4.1, 2.2.4.2, and 2.2.4.3 of Appendix D to 40 CFR, Part 75.

| Unit | Type(s) of Fuel Fired | Fuel Sampling Option |
|---|---|---|
| CIP1 | | |
| | | |
| | | |
| CIP2 | | |
| | | |
| | | |

3. Report the fuel sulfur content for BSG1 and BSG2 as follows:

| Unit | Type(s) of Fuel Fired | Maximum Weight % Sulfur Content | Minimum Cetane Index | Maximum %Aromatic Content |
|---|---|---|---|---|
| BSG1 | | | | |
| | | | | |
| | | | | |
| BSG2 | | | | |
| | | | | |
| | | | | |

**MONITORING REPORT FORM**
**BSG1 AND BSG2 OPERATING HOURS**
**COVERED SOURCE PERMIT NO. 0548-01-C**

**Issuance Date: February 24, 2010** **Expiration Date: May 21, 2012**

In accordance with the HAR, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the following information semi-annually:

(Make Copies for Additional Use)

For Reporting Period:_____ Date: _____

Company Name: Hawaiian Electric Company, Inc. (HECO)

Facility Name: Campbell Industrial Park Generating Station

**I certify that I have knowledge of the facts herein set forth, that the same are true, accurate and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by the Department of Health as public record.**

Responsible Official (Print):_____

Title:_____

Responsible Official (Signature):_____

**BSG1 and BSG2 Operating Hours**

| Month | Operating Hours | | Operating Hours 12-Month Rolling Basis | |
|---|---|---|---|---|
| | BSG1 | BSG2 | BSG1 | BSG2 |
| January | | | | |
| February | | | | |
| March | | | | |
| April | | | | |
| May | | | | |
| June | | | | |
| July | | | | |
| August | | | | |
| September | | | | |
| October | | | | |
| November | | | | |
| December | | | | |

**MONITORING REPORT FORM**
**STORAGE TANKS**
**COVERED SOURCE PERMIT NO. 0548-01-C**

**Issuance Date:** February 24, 2010 **Expiration Date:** May 21, 2012

In accordance with the HAR, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the following information semi-annually:

(Make Copies for Additional Use)

For Reporting Period: _____ Date: _____

Company Name: Hawaiian Electric Company, Inc. (HECO)

Facility Name: Campbell Industrial Park Generating Station

**I certify that I have knowledge of the facts herein set forth, that the same are true, accurate and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by the Department of Health as public record.**

Responsible Official (Print): _____

Title: _____

Responsible Official (Signature): _____

1. True Vapor Pressure Exceedences above 11 psia:

| Tank No. | True Vapor Pressure (psia) | How Determined | Type of Fuel Stored | Period of Exceedence | Storage Temperature ($^{o}$F) |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

2. Tank Inspection Summary:

| Tank No. | Inspection Date | Deficiencies/Defects | Date and Repair Made | Date Tank was Last Emptied |
|---|---|---|---|---|
| | | Description | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

LINDA LINGLE
GOVERNOR OF HAWAII

CHIYOME L. FUKINO, M.D.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. Box 3378
HONOLULU, HAWAII 96801-3378

In reply, please refer to:
File:

March 2, 2010

10-159E CAB
File 0548

Ms. Sherri-Ann Loo
Manager, Environmental Department
Hawaiian Electric Company, Inc.
P.O. Box 2750
Honolulu, Hawaii 96840-0001

Dear Ms. Loo:

**Subject: Alternate Fuel Use Request for CIP1 and CIP2**
**B100 and B99 Biodiesel**
**Covered Source Permit (CSP) No. 0548-01-C**
**Hawaiian Electric Company, Inc.**
**Campbell Industrial Park Generating Station**
**Location: 91-196 Hanua Street, Kapolei, Oahu**

The Department of Health acknowledges receipt of your request on February 24, 2010 to burn B100 biodiesel and B99 biodiesel (biodiesel/diesel blends with as much as 1% diesel) as alternate fuel for combustion turbine generators CIP1 and CIP2. Tuning and source testing results were provided with your request to define the minimum water-to-fuel mass ratios and minimum operating load for complying with the permit emission limits.

Pursuant to your request and in accordance with Attachment IIA, Special Condition Nos. C.9.d and E.11.c of the subject permit, the Department hereby approves the use of B100 and B99 biodiesel as alternate fuels for CIP1 and CIP2. For firing CIP1 and CIP2 on the subject fuels, the one hour average water-to-fuel mass ratios for each unit's water injection system shall be as follows pursuant to Attachment IIA, Special Condition No. C.5.b.ii of the covered source permit:

| WATER INJECTION SYSTEM MINIMUM WATER-TO-FUEL MASS RATIO | | |
|---|---|---|
| Load | Load (MW)[a,b] | Ratio (lb water/lb fuel) |
| peak | 135 | 0.71 |
| base - < peak | 116 - < 135 | 0.71 |
| 75% - < base | 87 - < 116 | 0.71 |
| 50% - < 75% | 58 - < 87 | 0.59 |
| minimum operating load - < 50% | 40 - < 58 | 0.51 |

Note a: Peak load is based on rated capacity at ISO standard day conditions (59 °F, 1 atm, and 60% relative humidity).
Note b: Minimum operating load, 50% load, 75% load, and base load are based on operating conditions at 86 °F, 1 atm, and 70% relative humidity.

The Department reserves the right to impose higher water-to-fuel mass ratios for the water injection systems servicing CIP1 and CIP2 based on continuous emissions monitoring system or source testing data. The Department may establish minimum water-to-fuel mass ratios that are incorporated into the permit for firing CIP1 and CIP2 on alternate fuels.

Also, please note that additional source testing is required for firing CIP1 on biodiesel to determine both filterable and condensable portions of particulate matter (PM), particulate matter less than 10 microns in diameter ($PM_{10}$), and particulate matter less than 2.5 micrometers in diameter ($PM_{2.5}$). The additional source testing to determine particulate emissions shall be performed in accordance with Attachment IIA, Special Condition Nos. F.1 and F.3 of the covered source permit.

If there are any questions regarding this matter, please contact Mr. Mike Madsen of my staff at (808) 586-4200.

Sincerely,

WILFRED K. NAGAMINE
Manager, Clean Air Branch

MM:mah
c: CAB Monitoring Section